

Modern packaging



Nominated for *Packaging's Hall of Fame* Story on Page 86

March 1953

NOW

Vinyl Acetate COPOLYMERS in solution

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for—

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- Solvent-Reactivating Coatings
- Grease-Proof Coatings
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- Gloss Coatings for Paper
- High Solids Lacquers
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Now you can get vinyl acetate **copolymers** in solution—**custom-made** to meet your own requirements. National has developed processes that yield copolymers whose intrinsic differences in chemical structure from that of polyvinyl acetate give them certain unique properties.

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The uses mentioned above are just a few of the many potential applications for these versatile materials. If any of these uses suggests an answer to one of your problems, we'll be glad to work with you in developing the right base and the right formulation to do your job.

For years we've polymerized vinyl acetate in solution form, perfecting our manufacturing processes to "tailor" these solutions exactly to our own needs in adhesive formulations. We have recently expanded our capacity, so that now the technical background and quality control know-how that this experience has given us is available to you. For further information or technical assistance, mail in the coupon.

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MP

YES—We are interested in Vinyl Acetate Polymers and Copolymers in solution for _____ (application).

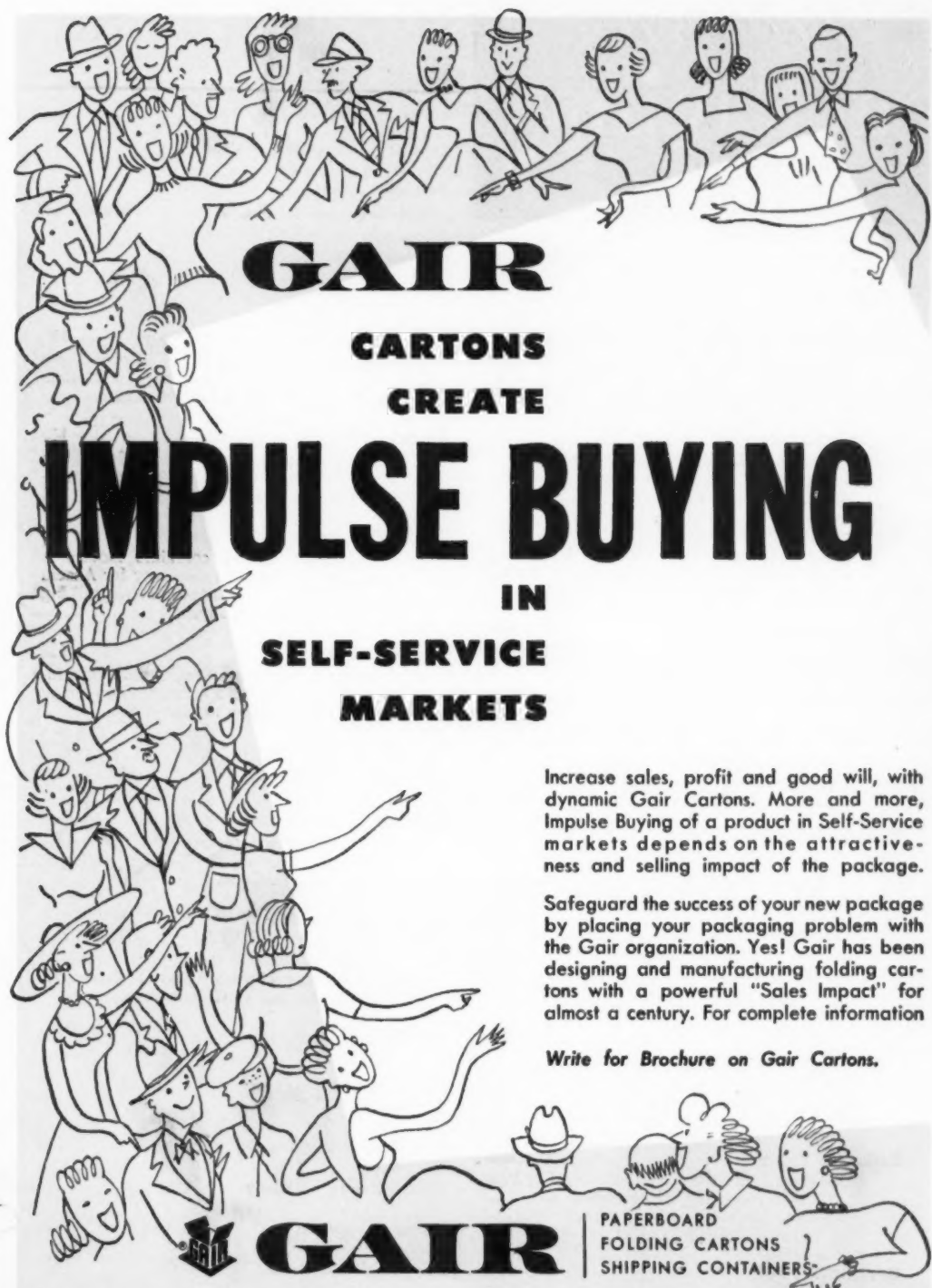
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Name _____ Title _____

Company _____

Street Address _____

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MARKETS

Increase sales, profit and good will, with dynamic Gair Cartons. More and more, Impulse Buying of a product in Self-Service markets depends on the attractiveness and selling impact of the package.

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GAIR

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SHIPPING CONTAINERS

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Modern packaging

Vol. 26

No. 7

March 1953

General

- Mechanization milestone** 73
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DO YOU HAVE A MULTIPLE-INSERT CARTONING JOB?

Where circulars, droppers and other inserts must be included in a package with a bottle, a single REDINGTON automatic cartoning machine handles the complete job. The machine illustrated keeps costs down and production up (with positive assurance that only filled cartons are packed for shipping) for CON-NAUGHT MEDICAL RESEARCH LABORATORIES, University of Toronto, Toronto, Canada, large scale packagers of biological products. Here is how it does it:

8 1/2 x 10 circulars (flat-stacked in a magazine) are given 4 folds, then placed over and around the top of the filled bottle as it is conveyed past the magazine. At the next station, the bottle-and-circular assembly are inserted into the carton, which the machine has fed from its magazine and opened. The REDINGTON completes the job (automatic throughout) by printing lot, date and price informa-

tion on the end-panel, then closing the end-flaps.

A special mechanism prevents the feeding of a carton to an empty conveyor pocket; and another leaves open the bottom of any carton which does not contain a bottle when it reaches the closing station.

REDINGTON Type 23 is used for many different applications, with up to 6 or more different items inserted per carton. Speeds up to 250 per minute can be reached. And like every REDINGTON machine, exclusive engineering and construction features (such as One-Piece Cast Iron Frame, and Ground and Polished Shafting) assure long, trouble-free machine life.

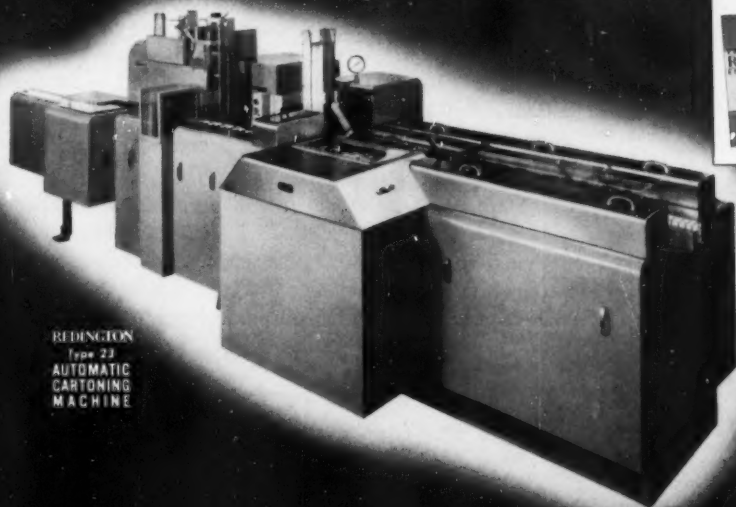
REDINGTON

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CARTONING...WRAPPING
SPECIAL PACKAGING**

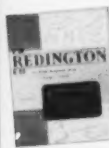
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another
REDINGTON
MACHINE
HIGH SPOT
in
AUTOMATIC
PACKAGING



REDINGTON
Type 23
AUTOMATIC
CARTONING
MACHINE



SEND FOR THIS COMPLETE CATALOG

32 illustrated pages of information about the many REDINGTON standard and special machines for AUTOMATIC PACKAGING of everything from Cudfish to Razor Blades. Write to the address above... or to our Eastern Office—Room 828A, 342 Madison Ave., N.Y. 17.

Modern packaging

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EDITORIAL

Service selling isn't dead

DEPARTMENT STORES have little to fear from supermarket competition—if they can maintain their one biggest asset: service to the customer. That's the opinion of the merchandise manager of one of the larger department stores, with whom we talked recently.

Service means not just clerk service; it means, among other things, having always on hand every item that the customer expects to find in a department store, in every size and shade. That means that every clerk behind a counter must be dedicated to the job of keeping up stock so that no customer ever need be told that an item is "out"—just because somebody forgot to re-order. And finding sales people who are dedicated to the job—and sufficiently intelligent to deal with complex stock situations—isn't easy these days.

What can packagers do about it?

Well, our man suggests that they can help the stores and help themselves by simplifying their lines, to make the job of stock-keeping a little less forbidding. The gamut of shades, styles and sizes in many otherwise standard products has grown much longer than it need be, he thinks.

There is in his store, for example, one popular brand of lipsticks that comes in 32 shades. Many of these shades are rarely called for; yet as long as the manufacturer continues to make them and to show them on his color chart, the store must continue to carry them. The merchandise manager suggests that this line could easily be reduced to 20 shades. And if the same principle were applied to hundreds of other lines throughout the store, service selling would be in a far stronger position.

Department stores are still doing around \$11 billion of business and we think they'll be around a long time. No thoughtful packager will get so excited about the new potential of supermarket selling as to forget that department stores have packaging requirements, too.

The Editors



Better packaging **Ideas**... bigger sales

Jacob Laub consistently comes up with a better loaf of bread. Dobeckmun comes up with better ideas in packaging. When the two came together in this printed cellophane wrap, sales jumped 6000 loaves the first week. Why? Well... there's not enough space here for that. But ideas—the kind that multiply sales—are brightening profits for hundreds of our customers. Interested? Give us the chance to serve you. The **Dobeckmun** Company, Cleveland 1, Ohio • Berkeley 2, California • Bennington, Vermont

Atlanta • Boston • Charlotte • Chicago • Cincinnati • Dallas • Detroit • Indianapolis • Kansas City • Lexington • Los Angeles • Memphis • Milwaukee
New Orleans • New York • Philadelphia • Pittsburgh • Portland • Richmond • Rochester • Salt Lake City • Seattle • St. Louis • St. Paul • Tampa

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you want?



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HEEKIN PERSONAL SERVICE
WILL CAPTURE IT FOR YOU

HEEKIN CANS carry merchandise to market safely, efficiently and profitably . . . and have for fifty-two years. Today's emphasis is on package design. Heekin can be of assistance beyond the mere production of cans. Heekin offers you a personal service—discussion—opinions—designs—the outside viewpoint by Men of Experience. We're here to talk it over.



1909
52
Years of
Service
1961
HEEKIN
Lithographed CANS

THE HEEKIN CAN CO.,
PLANTS AT CINCINNATI & NORWOOD, OHIO; CHESTNUT HILL, TENNESSEE; SPRINGDALE, ARKANSAS

News about
B. F. Goodrich Chemical *raw materials*



**Better *fronts* for paper
with Geon coatings!**

HERE you see a few of the many possible coating uses for Geon materials. And you'll find in the broad range of Geon latices and solution resins materials ideally suited for specific applications.

For example, Geon latices are used as functional coatings for paper and boxboard to provide grease resistance, water resistance, low moisture vapor transmission, and resistance to abrasion and chemicals. Geon latices do not need solvent recovery systems—are safe and easy to use.

Geon solution resins also have many uses for functional coatings, for heat sealing coatings, and are equally adaptable for decorative and specialty coatings where high gloss and toughness are desirable. Geon resin 200X20 provides unusual economies because it is soluble in low-cost organic liquids such as toluene, xylene and high aromatic naphthas.

Write for helpful advice on your coating or packaging problems. Our technical service will help you determine the Geon materials best suited to your needs. Please address Dept. GL-3, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. In Canada: Kitchener, Ontario. Cable address: Goodchemco.



GEON RESINS • GOOD-RITE PLASTICIZERS . . . the ideal team to make products easier, better and more saleable
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ELUSIVE
QUALITIES**



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A few things RIEGEL
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- ▶ Stop grease penetration
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- ▶ Reduce breakage
- ▶ Prevent sifting
- ▶ Protect from light
- ▶ Resist alkalis
- ▶ Resist corrosion
- ▶ Boost machine efficiency

The vital qualities of today's "best sellers" create many problems in protective packaging. A delicate aroma "just disappears."

A fine oil carefully processed into the product may stain the wrapper. Or a delightful crispness may revert to a sad sog.

These are problems Riegel has solved over and over again, for hundreds of products from soap, dessert powders and coffee to X-ray films and ball bearings. In one case the answer may be a wet-strength greaseproof . . . in another it may be a triplex lamination of foil and special glassines. Whatever your package may need, Riegel can develop the right papers . . . quickly, efficiently, economically.

Write to Riegel Paper Corporation, P. O. Box 170,
Grand Central Station, New York 17, N. Y.

Riegel

FUNCTIONAL PAPERS FOR PROTECTIVE PACKAGING

▶ WRITE FOR SAMPLE BOOK

A glassful of juice in a bag!



**"Alathon" in one-serving laminated package for frozen orange juice
provides cold-temperature flexibility, low moisture transmission, strong heat-seal**

Pasco Packing Company was working with Walgreen Drug Stores to develop a single-service package for orange-juice concentrate—a package designed to eliminate slow and costly orange squeezing at busy soda fountains. But the package had to meet many difficult requirements. For example, it had to remain tough and flexible at temperatures as low as 40° below zero!


After trials, Pasco found the answer in an automatically filled and sealed pouch bag of Cellophane laminated with a film of "Alathon" polyethylene resin. In addition to its excellent low-temperature

properties, the "Alathon" on the inside of this package insured ease of heat-sealing, greater strength and an extremely low level of moisture-vapor transmission.

This successful package contains 2½ oz. of concentrate . . . quickly and economically makes a 10 oz. glass of juice. As a result—the Pasco Packing Company has a new marketing technique in operation!

Perhaps "Alathon"—with its unique combination of properties—can help you solve a packaging problem. Consider using it in multi-wall or single-ply bags, pouch bags, chipboard containers and trays, fiber drums and cartons.

* REG. U. S. PAT. OFF.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

Polychemicals
DEPARTMENT
PLASTICS • CHEMICALS

WRITE FOR FREE BOOKLET

describing the properties and uses of "Alathon" in the packaging field, or simply mail this handy coupon. We'll gladly put you in touch with sources of supply for packaging materials coated with "Alathon."

E. I. du Pont de Nemours & Co. (Inc.)
Polychemicals Dept. 513, Du Pont Bldg., Wilmington 98, Del.
Please send me the new booklet on packages having coatings of "Alathon."

Check type of package most interested in: Multi-wall bags (),
Single-ply bags (), Pouch bags (), Fiber drums & cartons (),
Chipboard container & trays (), Overwraps (), Other ().

Name

Title

Company

Address

City State



Your Product is Well-Dressed and "Sell-Dressed" in a Gaylord Container



*Their unseen quality gives you
an extra margin of safety.*

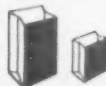
Strikingly printed Gaylord shipping containers keep on selling your name and product wherever they go. This effective and economical medium is a natural to increase the impact of your advertising and other promotions.

Your nearby Gaylord sales representative will be happy to tell you more about these "traveling billboards."

You will find him listed under Boxes (Gaylord) in the classified pages of your phone book.

GAYLORD CONTAINER CORPORATION

General Offices: ST. LOUIS • Sales Offices Coast-to-Coast



CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT BAGS AND SACKS • KRAFT PAPER AND SPECIALTIES

A TREAT IN MARDI GRAS LAND



in **TRI-STATE** *Rigid Plastic Boxes*



New Orleans . . . famous for its discerning taste in food . . . acclaims **REALTREET HOGSHEAD CHEESE**.

And Realtreet Foods, leading processors of delicious, ready-to-serve refrigerated foods in the New Orleans area, chooses our reusable box for 1-pound packages of Hog'shead Cheese. The lustrous, clear plastic enables their tempting product to be shown to its greatest advantage. It is a size familiar to housewives. Dealers like it too, because it stacks easily and securely in self-service refrigerator cases.

Realtreet is only one of the many alert companies that has discovered packaging efficiency and added sales appeal by using Tri-State Rigid Plastic Boxes.

Our stock box No. 102F (2 1/4" x 2 1/4" x 5") provides Realtreet Foods with a bonus, show-case package. Build your sales with Tri-State Rigid Plastic Boxes. If we cannot satisfy your needs from our wide range of stock sizes and shapes, we will mold to your specifications.



The best Rigid Plastic Boxes are Injection Molded by
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MARCH 1953



... THAT MAKES KOUNTY KIST
SALES SHINE!

Women's eyes are caught by the gleam. Their hands reach impulsively for Kounty Kist brand Peas. And they buy again and again because they discover "a great value in good eating" . . . the peas are as good as the glowing green label *looks!*

So the sales curve curls upward . . . as it has ever since this can appeared in an aluminum foil label back in 1947. That's the story of every performer in "The Greatest Sales Show on Earth" . . . the nation-wide supermarket display of Reynolds Aluminum Foil Packaging. Wider markets . . . faster sales!

In the case of these canned peas, the reason is eye-appeal . . . the gleam of aluminum foil, with the glowing richness of Reynolds color-gravure printing . . . beauty that stays clean and bright through all conditions of shelf life. For many other products this advantage is coupled with the unequalled *protection* of Reynolds Aluminum Foil . . . to keep cookies five times fresher, to keep dried fruits at their best, to maintain factory-freshness of sugar-coated cereals.

To whichever class your product belongs, it will sell better in self-selling Reynolds Aluminum Foil packaging. Let us show you. Call the nearest Reynolds Sales Office. Or write **Reynolds Metals Company**, General Sales Office, Louisville 1, Kentucky.



The "Kitchen Engineer", with her Reynolds Wrap, knows and demands aluminum foil packaging!



Pioneers of
Progress in
Aluminum Foil
Packaging

REYNOLDS ALUMINUM

SEE "MISTER PREPERS," starring Wally Cox, Sundays, NBC-TV. HEAR "Fibber McGee and Molly," Tuesdays, NBC Radio Network



KOUNTY KIST PEAS
A GREAT VALUE IN GOOD EATING

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**DON'T MISS THE GREATEST
SALES SHOW ON EARTH!**



Baby chicks being readied for shipment in corrugated containers made from Mead Corrugating and Liner.

If the cheeping of all the chicks that are sent to market these days were concentrated in a single note, the decibels would be deafening. For chick-raising has become a national, even an international, business, in which the hatcheries think nothing of sending their delicate and fragile progeny thousands of miles by rail or air express.

In fact, reliable figures disclose that the hatchery business grew from a \$75,000,000 industry in 1940 to one of \$365,000,000 in 1952—almost a 400% increase. And the peak has not been reached.

Delicate as they are, most of these chicks traveled in fiberboard containers, a product of the paper industry. And judging from our own statistics, many of those containers were made of MEAD .009 CHESTNUT CORRUGATING MEDIUM and MEAD KRAFT LINER. With the combination of chestnut and other hardwood fibers, these basic packaging materials provide the rigidity, strength and splinter-free qualities that shippers of hundreds upon hundreds of American products demand today.

Mead Board is sold direct by

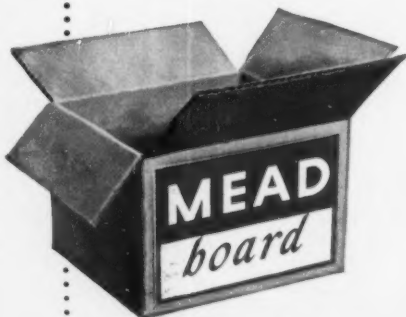
Mead Board Sales, Inc.

3347 Madison Road, Cincinnati 9, Ohio

NEWARK 2, N.J.
786 Broad St.

CHICAGO 6, ILL.
205 W. Wacker Drive

LYNCHBURG, VA.





Service Map

The map above is self-explanatory. No matter where you are, there's an H-A sales office or factory near you to efficiently service your glass container needs and problems.

HAZEL-ATLAS GLASS COMPANY
WHEELING, WEST VIRGINIA





Cut either!

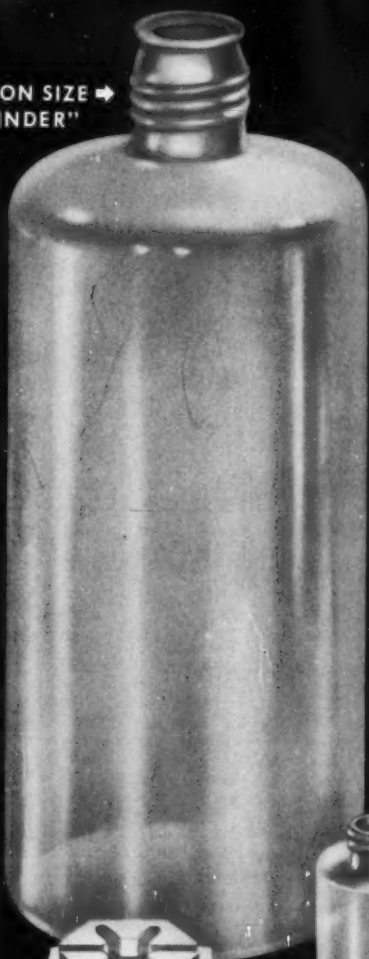
Cardboard or cellophane . . . asbestos or felt . . . just name your material! If you cut it from rolls, the Beck Sheeter will cut it. It costs nothing to tell us your problem . . . and it might prove to be a big pay-off idea for you. Write.

CHARLES BECK MACHINE CORPORATION
406 N. 13th Street **BECK** Philadelphia 8, Pa.

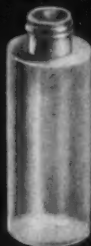
An Ever Growing Range for Your Ever Growing Uses

MILLS PLASTIC[®] Bottles

GALLON SIZE →
"CYLINDER"



Gallon Wrench Grip Closure



2 oz. "Cylinder"



2 oz. "Oblong"



4 oz. "Oblong"



Standard Closures



4 oz. "Cylinder"

More and more firms are discovering that MILLS-PLASTIC unbreakable bottles serve their needs far better than any other bottles. MILLSPLASTIC leak-proof containers now meet daily use in packages for cosmetics, acids, photosensitive chemicals, hygroscopic materials. Our growing line of standard bottles and expanding scope of custom work is the direct answer to these widening needs—yours among them.

STANDARD BOTTLES—Our history-making gallon sized bottle and precision engineered closure are the largest in our standard line which also includes Mills "Cylinder" in 2-4-6-8 ounces, Mills "Oblong" in 2-4 ounces. Both styles are available in natural Polyethylene or your preferred color. Standard atomizers, closures and tubing are also available.

CUSTOM BOTTLES—We are currently meeting specialized needs by creating custom shaped bottles in an unprecedented variety of styles, sizes, colors. We also make special atomizers and closures.

Let us show you today how and why MILLSPLASTIC bottles can best fill your needs.

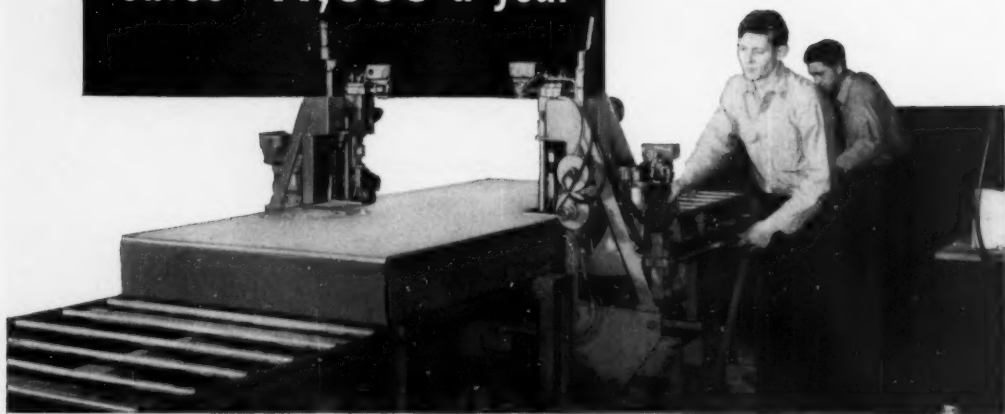
ELMER E. MILLS CORPORATION
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Detroit: 139 W. Maple, Birmingham, Michigan

Mfd. under patents 2,515,003—2,579,300—2,579,390. Other pats. pend.

EXCELSIOR CO.
 staples bicycle cartons
 saves **\$11,000** a year



with International Stapling Machine



A daily savings of \$36 . .
 \$925 a month . . \$11,000
 a year . . through the
 use of an International
 Retractable Anvil Stapling
 Machine!

Yes, these are actual
 cost reduction figures re-
 ported by H. W. Snyder,
 president of Excelsior
 Manufacturing Co.,
 Michigan City, Indiana

. . and also Excelsior's parent company, H. P. Snyder Co., Little
 Falls, New York . . both nationally known manufacturers of
 bicycles.

Mr. Snyder has this to say about the multi-head retractable
 anvil stapling machine in use at the Michigan City plant:

"Our packing costs are way down. Formerly we had 7 men
 in this department . . but now with our International Stapler,

we use only 4 men. This frees *three men for other important work*
 in our plant.

"Carton stapling is faster. The per-man closure of cartons
 with the stapling machine is 19 . . compared to only 11 in the
 same period, using glue.

"Shipping and warehousing damages are reduced. We
 find holding qualities of staples excellent . . stapled cartons do
 not open in transit as was frequently the case when we glued
 our cartons.

"Working conditions are cleaner. With staples, we have no
 mess . . carton appearance is improved because we do not have
 the problem of glue spillage."

If you ship in corrugated or fibre cartons, an International
 Stapling Machine will close them better, faster and more
 economically. Write for details.

Have you seen the new sound-movie, "Package for Profit"? It
 shows International Stapling Machines at work in plants of well-
 known manufacturers. Ask about bookings.

Package for profit . . use International Staples for faster, finer closures

a seal of security



INTERNATIONAL STAPLING MACHINES

International Staple & Machine Company
 800 East Herrin Street, Herrin, Illinois

**"Hold dinner, Mom—
the new tractor just arrived!"**



The American farmer's tremendous achievement of feeding our rapidly growing population as well as many other nations has been made possible chiefly through farm mechanization. Makers of power farm equipment have served the world well, with dynamic technical progress and education of farmers through the printed page.

Much of this better-farming promotion appears on Oxford papers. The extra printing accuracy afforded by these quality papers make Oxford grades fit foundation for pages that sell farm equipment.

Oxford Papers
Help Build Sales

OXFORD PAPER COMPANY, 230 Park Ave., New York 17, N.Y.

• OXFORD MIAMI PAPER COMPANY, 35 East Wacker Dr., Chicago 1, Ill.

Mills at Rumford, Maine, and West Carrollton, Ohio

NEW VAPOSET SPEEDS



Tender Leaf
BRAND
TEA BAGS



No Other Tea Bag
Offers This
Exclusive Flavor Protection!

Each Tea Bag Is In Its Own
Individual Envelope

No Other Tea Bag
Offers This
Exclusive Flavor Protection!

Each Tea Bag Is In Its Own
Individual Envelope

No Other Tea Bag
Offers This
Exclusive Flavor Protection!

Each Tea Bag Is In Its Own
Individual Envelope

PACKAGE PRINTING

Fast-selling products like Tender Leaf Brand Tea are today packaged in boxes printed with fast-setting IPI Vaposet Ink. Within seconds after packages are printed, they can be cut, creased, packed, and if need be, shipped—when you use the remarkable new IPI Vaposet that sets *instantly* with steam. Even warm, moist corrugated board, with just its natural moisture, sets Vaposet fast enough for fabrication shortly after printing. Quality production can keep pace with peak customer demand.

Of prime importance to food package and wrapper printers, Vaposet Inks are free of odor—perfect for candy wraps, cups, breadwrappers, and a dozen other stocks. They have excellent heat-sealing qualities—sealed ends of printed waxed breadwrappers really stay sealed. And their colors are stronger, cleaner, with better finish and improved rub-resistance.

For better package printing, try IPI Vaposet Ink on your next job. You'll save time and money.

IPI Research At Work For You



Food package and wrapper printers must use inks like IPI Vaposet that are free of objectionable odors. IPI research technicians make sure that even hot-wrapped bread will not pick up ink odor. That's why so many leading letterpress breadwrap printers use Vaposet exclusively. Be sure to specify IPI Vaposet Ink, made by the makers of Interchemical Printing Ink.

Vital to the success of today's big volume package printing is the accelerated drying speed of IPI Vaposet Ink. As seen at right, it sets instantly in the presence of steam. This is a major contribution to letterpress breadwrap printing . . . typical of the many improvements in printing inks that come from IPI research laboratories.



IPI, IC, Vaposet are trademarks of Interchemical Corporation

INTERCHEMICAL CORPORATION

Printing Ink Division • 67 West 44th Street, New York 36, New York

RELY ON IPI FOR LEADERSHIP IN INK RESEARCH



RADO PACKAGES

**OPEN
AMAZING
NEW
SALES
POSSIBILITIES**

RADO PACKAGES* are the sort of things Sales Managers and Marketing Directors dream of but rarely find—practical, radically new, low-cost packages that ideally lend themselves to all-out consumer promotion.

RADO PACKAGES are *all plastic*. They are made automatically and continuously from a wide range of thermoplastic materials, both clear and opaque. The packages are made and filled simultaneously and can be of regular or irregular shape.

Equally suitable for liquids or pastes, RADO PACKAGES can even be produced in the form of unique capless collapsible tubes which have self-sealing apertures.

If you feel your product could benefit from this *new type of packaging* that is novel, practical, low cost and wonderfully responsive to consumer promotion, write to the Main Office of Technopol Laboratories, or to the Packaging Service Station nearest you for additional facts.



*U.S.A. Patent Nos. 2,517,027, 2,530,400
British Patent Nos. 599174, 599183
Patented in 36 other countries. Other patents pending.

TECHNOPOL LABORATORIES LIMITED

Tel: London Wall 9452-9453 • 212 St. John Street, LONDON, E. C. 1, England • Cables, Telabor, London

Packaging Service Stations:

S. AFRICA
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Smith Street, DURBAN.

SWITZERLAND
GISIGER & CO. A.G.
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Zürich 1
Tel: 051.27.24.47
Factory: Obfelden.

ITALY
GISIGER & PATRIZI
S.p.A.
Piazza Santa Felicità 4
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PARIS 6^e. Phone
ODEON 71-33.
Factory: 24 Avenue de la
Republique CHATOU,
France. Tel: 274.

AUSTRIA
Tupla Gesellschaft, Vienna
IV., Wiedner Hauptstrasse 8
Telephone: A 34067

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Tel: 594.96.
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BRUSSELS.
Tel: 22.19.32.

IRE
TECHNOPOL PACKAGING
SERVICES, 81/2 Aungier Street,
DUBLIN. Tel. Dublin 63624

Satisfaction rests on the carton



Along with more than half of the major users of shipping containers who maintain their own package testing laboratories, General Mills, Inc. uses UNION Corrugated Containers. Choose your shipping container well. It is the guardian of your good name.



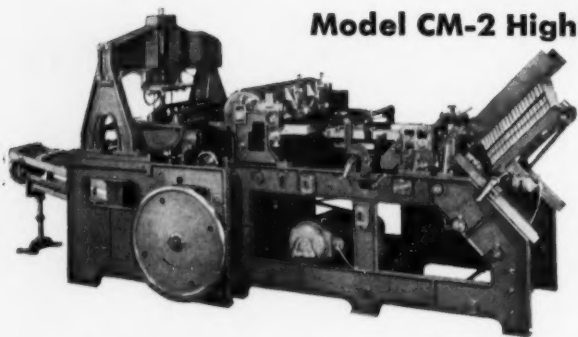
UNION

BAG & PAPER CORPORATION

CORRUGATED CONTAINER DIVISION • Box Plants: Savannah, Ga., Trenton, N. J., Chicago, Ill.
 Eastern Division Sales Offices: 1400 E. State St., Trenton 9, N. J. • Southern Division Sales Offices: P.O. Box 570, Savannah, Ga.
 Western Division Sales Offices: 4545 West Palmer, Chicago 39, Ill. • Executive Offices: Woolworth Bldg., New York 7, N. Y.

Now!... Production Speed is **DOUBLED** with the **NEW**

Model CM-2 High Speed Brightwood Machine



Here are typical Brightwood blanks, every one of which can be set up on the Model CM-2 High Speed Brightwood Machine at speeds of 120 per minute or more.



Once again
the BRIGHTWOOD leads the way —

You get

- THE SAME HIGH QUALITY BOXES
- THE SAME DEPENDABILITY
- THE SAME RUGGED CONSTRUCTION
- BUT... twice the speed!
- Speeds up to 120 per minute

These important qualities are all built into the new Model CM-2 High Speed Brightwood Machine.

SPEED — Half a century ago the Standard Brightwood, first machine of its kind and alone in the field, offered a speed of 20 per minute. From 20, to 30 to 40 to 60 per minute — and now, the new high speed model doubles previous high speed and provides 120 boxes per minute.

EASY ADJUSTABILITY — In designing this new model, we also gave a lot of attention to easy change over, with the result that it is even simpler to make a size change in the High Speed machine than in the Standard Brightwood, which is noted for its easy adjustability. Change parts required for new sizes on the Model CM-2 are at a minimum, most adjustments being made by handwheel or crank.

WIDE SIZE RANGE — The Model CM-2 glues and forms boxes from minimum 2 x 2 x 3/4" deep up to 14 x 7 x 3 1/2" deep. It will handle two-piece boxes and covers, one-piece hinged cover boxes, trays, etc.

NEW FEATURES — A new type of rotary feeder; rotary glue applicators; electric eye providing "no blank — no glue" (absence of blank stops gluing mechanism); another electric eye providing "no box — no blank feed" (absence of formed box in the well stops blank feeder). We've retained other important features of the Standard Brightwood that have proven their superiority over the years.

You probably won't want to run this machine for 40 years, but you can. It's built to last... that's our policy. There are Standard Brightwoods in the field still giving rugged service after 40 years, still producing the firmly glued and well squared boxes for which the Brightwood is famous.

U. S. AUTOMATIC BOX MACHINERY CO., INC.

Owning and Operating NATIONAL PACKAGING MACHINERY CO. • CARTONING MACHINERY CORP.

122 ARBORETUM ROAD, ROSLINDALE, BOSTON 31, MASS.

Branch Offices: New York ★ Chicago



Hot and Gross Weighing
Package Forming and Filling
Carton Sealing, Lining,
Wrapping, Box Making



How to "soup up" sales

THANKS to packages designed by Milprint and Shellmar and made with Kaiser Aluminum Foil, dehydrated soups made by various manufacturers have all these sales advantages:

Point-of-Sale Appeal—Sparkling surface of aluminum foil makes package a standout on the shelf—yet minimum shelf space is required. Small, lightweight package takes less room in shopping bag, is easy to carry. Encourages quantity buying.

Flavor Protection—Non-porous aluminum foil keeps flavor in, moisture out indefinitely. Absolute product purity is insured, even in long storage. And aluminum imparts no flavor.

Production Ease—Aluminum foil is easy to print on. Flat surface of package can be fully utilized for product name display and label information. Durable heat seal is easily and speedily applied.

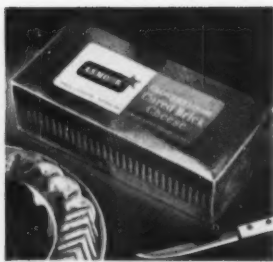
Give the benefits of Kaiser Aluminum Foil to your customers—whether the product is foods, medicines, pharmaceuticals, fluids, electronics, machinery. Supplies are increasing daily. For Kaiser Aluminum is completing facilities to increase its production of primary aluminum 137%.

Call any office for complete information and current availability. Kaiser Aluminum offices and warehouse distributors in principal cities. Kaiser Aluminum & Chemical Sales, Inc., Oakland 12, California.

Kaiser Aluminum

Setting the pace—through growth, quality and service

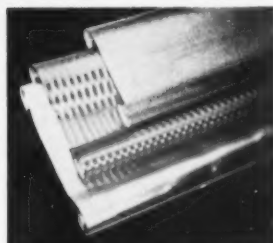
MARCH 1953



CHEESE PRESERVER—Kaiser Aluminum Foil wrapper on Armour Creameries' Cloverbloom Cured Brick Cheese protects quality, prevents drying out, minimizes costly weight loss.



RATION KEEPER—Many hygroscopic military rations such as dehydrated coffee and milk rely on Kaiser Aluminum Foil as a moisture and vapor barrier.



GIFT WRAPPER—What gift wouldn't look more desirable wrapped in handsome Kaiser Aluminum Foil? Plain, embossed and printed patterns give variety.



PIE SELLER—Pie plates made from Kaiser Aluminum Foil conduct heat evenly, quickly in baking. Adds eye-appeal on the shelf, steps up sales. No washing, no refunds, no transfer to paper plates necessary.



Oh how



they go for



these pickles!



Put a dish of firm, crisp Rainbo Pickles* on the table and watch them disappear like magic. Folks just can't resist them. They add such a pleasing touch to any meal or snack.

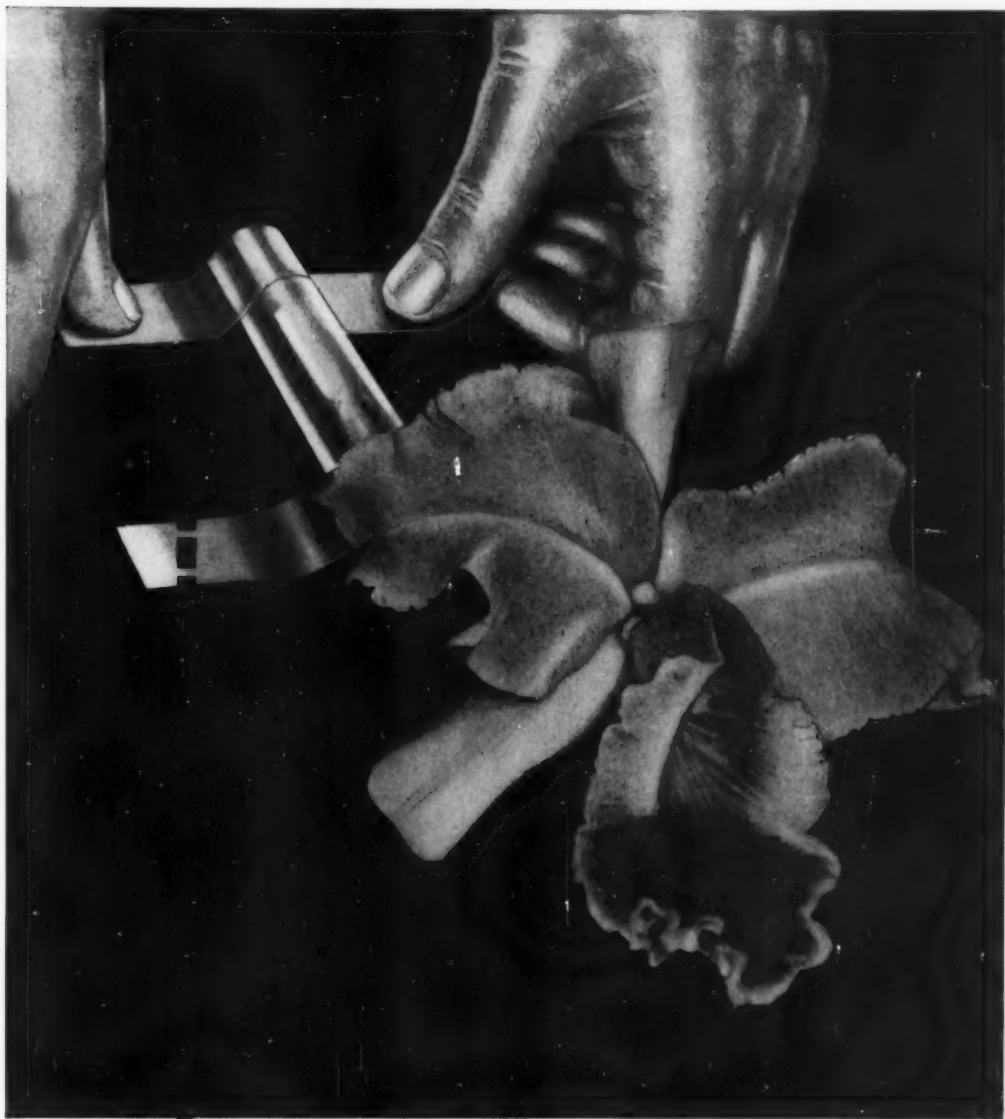
The people who pack Rainbo Pickles protect the original flavor and quality of the product with Crown Screw Caps. These closures have the famous Deep Hook Thread and specially selected liners. In addition to their dependable sealing qualities, Crown Screw Caps provide trouble-free application on the production line . . . and consumers like their easy opening and tight re-sealing.

When you're thinking about metal closures for *your* product, you'll find many advantages in coming to Crown. Crown Cork & Seal Company, Baltimore 3, Md. *World's Largest Makers of Metal Closures.*

CROWN CLOSURES

Approved by millions of housewives

*Rainbo Pickles are packed by the Brown-Miller Co. in plants at Texarkana, Tex., New Orleans, La., and Wiggins, Miss.



Water containers ship safely, held firmly in place by Blue Tab Cellophane Tape. No doubt there is an important use for **TEXCEL** Blue Tab in your business. Our Tape Engineering Service can give you the answer . . . without obligation.



TEXCEL[®]

CELLOPHANE TAPE

INDUSTRIAL TAPE CORPORATION, NEW BRUNSWICK, N. J.

MARCH 1953

27



UNBREAKABLE Plaxpak bottles spell security for consumer, less returns, no mess for dealer, no losses from breakage or damage to packed merchandise.



COLORFUL containers add eye-appeal to displays. You can use color as never before to attract and to identify your product for point-of-sale promotion.

Plaxpak[®] Bottle

perfect package for self-service selling



Dramatic new colors of Plaxpak bottles enable you to identify your product more positively in massed aisle displays. The unbreakable plastic packages are safe from careless elbows and carefree youngsters . . . an important talking point when asking dealers for exposed display locations.

Plaxpak bottles are available in many different stock shapes, sizes and colors, or they can be custom molded to original designs. Stock fittings convert the squeeze bottles into atomizers, droppers and insufflators.

LIGHTWEIGHT Plaxpak bottle means lighter bundles, less packing material, handling charges, and shipping costs.

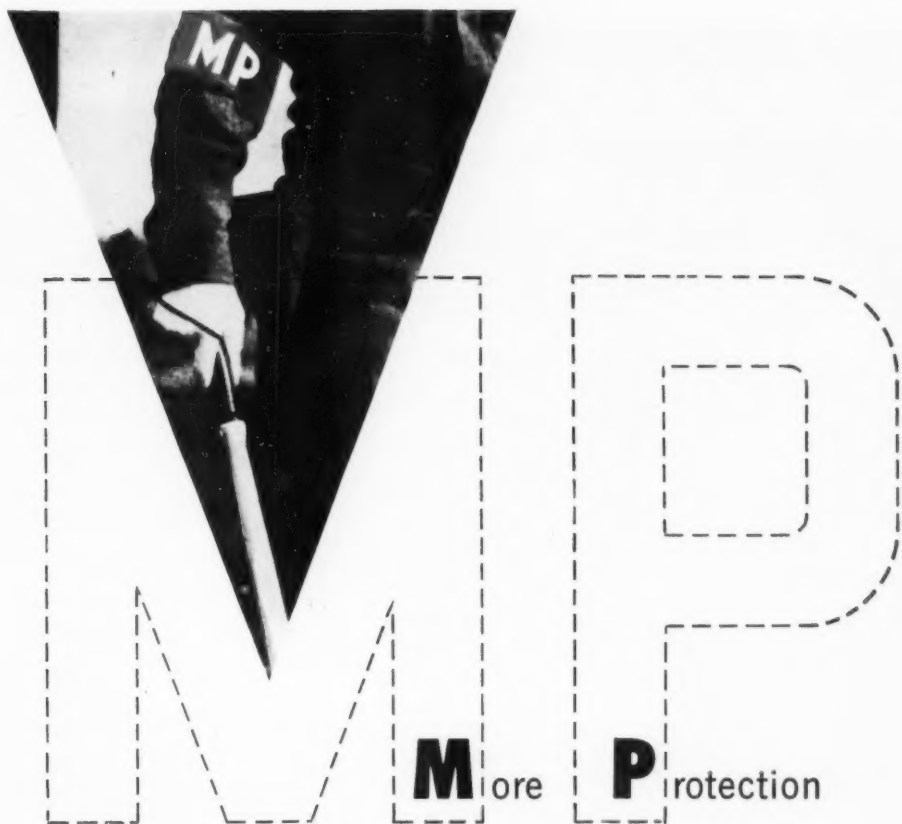
PLAX CORPORATION

Subsidiary of Emhart Mfg. Co.

WEST HARTFORD, CONNECTICUT

IN CANADA: Plax Canada, Ltd., Toronto DISTRICT SALES OFFICES: New York, Philadelphia, Chicago and other principal cities.





More **P**rotection

in packaging your product
for delivery to the nation's
far flung fighting forces.
For **M**ilitary **P**ackaging
specify . . .

FLEXKIN



↔ The flexible moisture-vapor barrier
that meets your Army, Navy and
Air Force specifications.

Samples and technical brochure on request.
ACME BACKING CORP., Brooklyn 6, New York

SPRATAINER Does It Again!



BELT DRESSING *Now* SPRAYS FROM
CROWN-SPRATAINER

To Reinforce "The Lifelines of Production"



Grako SPRAZON is a pressure-product of Graton & Knight Company, Worcester, Mass. Used regularly, it stops belt slip, lengthens belt life — forestalls loss of valuable production time and power. Application from SPRA-TAINER is quicker, easier and more efficient. Safer, too, because hands and arms stay away from moving machinery. No belt or pulley is too difficult to reach when you use SPRAZON.

Widespread Pressure Packaging started with Crown's invention of lightweight SPRA-TAINER, World's Leading Propulsion Can because of exclusive "Modern Design" and "No Top Seam—No Side Seam" construction. Creative Packaging in all lines starts with the selection of a Crown Can from the vast variety we manufacture to meet the many and diverse needs of American industry.

One of America's Largest Can Manufacturers

CROWN CAN

Division of

CROWN CORK & SEAL COMPANY

PHILADELPHIA, CHICAGO, ORLANDO, NEW YORK, BALTIMORE, ST. LOUIS, BOSTON

Concrescence...

"Union of parts originally separate"

As defined by Webster, the CONCRESCENCE of acetate, boxboard, fabric and printed wraps into a styled package to increase product appeal is unique with . . .



W

WARNERCRAFT®

Finest Name in Packaging

THE WARNER BROTHERS COMPANY

BRIDGEPORT 1, CONNECTICUT

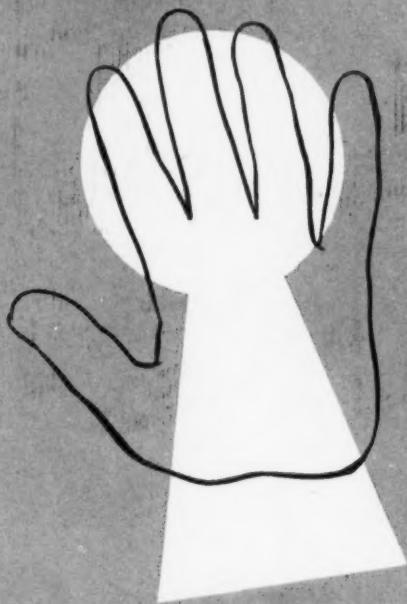
New York Sales Office: 200 Madison Avenue, New York 16, N. Y.

Boston Sales Office: Little Building — Room 553, Boston 16, Mass.

FOLDING CARTONS—HAND MADE OR MACHINE MADE SETUP BOXES

TRANSPARENT ACETATE BOXES—COUNTER DISPLAY BOXES

no secrets!



DUO-TITE

the perfect "No-SIFT" bag. Ideal for insecticides, fertilizers, chemicals, any products which must be packaged in airtight containers. Its sturdy construction combines special liners with folding, gluing and heat-sealing.



THERMOSEAL

the bag with 20% more protection. It's a fact. There is 20% more protection in Betner's THERMOSEAL than in other closures. Eliminates staples. Insures water-vapor protection, sift-proofness, and retention of flavor.



LAMOFILM

the bag with extreme moisture-impregnability. Locks moisture out. Protects freshness, flavor, goodness of food by a patented film of rubberized compound held firmly in suspension between two layers of glassine.



FLAV-O-TAINER

the bag with vacuum-packed freshness. Pliofilm® lined, all inner seams are hermetically sealed. Replacing air with inert gas, and sealing top, FLAV-O-TAINER becomes an airtight unit. Used whenever freshness is a must.

*Mfd. by Goodyear T. & R. Co.



Betner's service is complete . . . from idea to finished bag. Let Betner recommend the proper machinery for closing bags and inserting liner bags in cartons.

NO SIREE! We've nothing to hide. We have plenty of secrets—but they're all at your disposal. Betner's experienced packaging technicians, designers and engineers have the "know-how" that will solve your specific packaging problems. One of Betner's five modern, efficient plants is strategically located near enough to serve your every need. We'll gladly show you our secrets of economical, practical production and stimulating sales appeal. Drop us a line.

Whatever the packaging need, there's a Betner bag...FILL IT!

BENJ C BETNER CO

Devon, Pa.

PLANTS ALSO LOCATED IN:

- RICHMOND, VIRGINIA
- PARIS, TEXAS
- APPLETON, WISCONSIN
- LOS ANGELES, CALIFORNIA



stops the eye . . . starts the sale pack to attract in maryland blue

Here is true double-take packaging. It stops the busiest shoppers . . . stops their eyes and starts the sale. It's double-duty packaging, too. Acts as a strong, practical container and as a powerful advertising, merchandising and selling tool. Maryland Blue Glass makes your product stand out and shout "Buy Me!" So follow the lead of many famous brands . . . pack to attract in Maryland Blue. Write for samples today.

MARYLAND GLASS CORPORATION • BALTIMORE 30, MARYLAND

also available in clear glass



From the *Gardner* Gallery of famous American Packages

Natural Attraction?

... (IT COULD VERY WELL BE)

If "like attracts like" then it's not surprising that so many of the fine products on the nation's shelves wear Gardner cartons.

For just as these products have earned the confidence of consumers . . . so have Gardner cartons earned the confidence of manufacturers. And we believe this confidence comes from something more than a knowledge of Gardner's extensive physical facilities.

Here at Gardner we believe in never being quite satisfied with a good job. We feel an obligation to ourselves—and to our customers—to do even better, tomorrow, what we have gained recognition for doing well, today.

We think that's an even more important reason why you'll find so many of America's most famous products packaged in Gardner cartons.

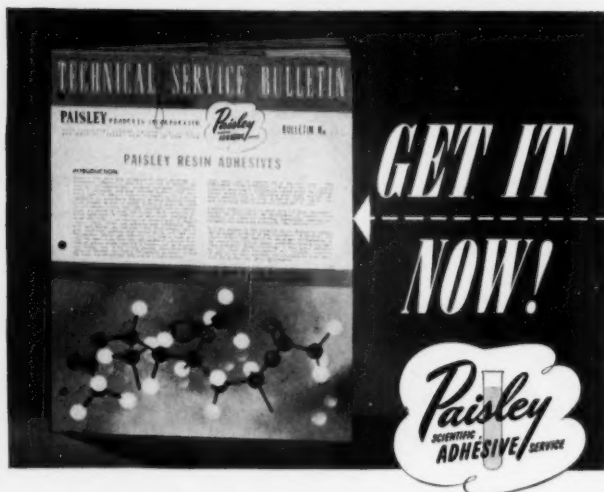
THE GARDNER BOARD AND CARTON CO.

Manufacturers of Folding Cartons and Boxboards

GENERAL OFFICES: Middletown, Ohio—PLANTS: Middletown, Ohio; Lockland (Cincinnati), Ohio
Sales Offices in Chicago, Cleveland, New York, Philadelphia, Pittsburgh, St. Louis



Here's *VALUABLE INFORMATION* For ALL Users Of Resin Adhesives!



Contains Data Never Before Available For Resin Adhesive Users

Every Resin Adhesive user needs this new Paisley Technical Service Bulletin. It tells you all about Resin Emulsion formulation, properties and advantages of Resin Adhesives, methods of application, tips on handling, and lots of other valuable information. A chart of properties available for various industrial uses is a special feature of this profusely illustrated bulletin. A free copy will be mailed promptly to Resin Adhesive users asking for it on company stationery!

TEAR OUT... FASTEN TO LETTERHEAD AND MAIL TODAY!

PAISLEY PRODUCTS INC., 1770 Canalport Ave., Chicago 16, Ill.

Gentlemen: Without obligation, please send me the new Paisley Technical Service Bulletin No. 23.

☐ We have a special Gluing problem. Send us your Adhesive Operation Data Sheet. (You fill in and return to us for Laboratory recommendation.)

FIRM _____ BUYER _____

STREET _____ CITY _____ STATE _____



PAISLEY

PRODUCTS INCORPORATED
DIVISION OF
MORNINGSTAR, NICOL, INC.

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SALES OFFICES: Baltimore • Boston • Cincinnati • Cleveland • Denver • Detroit • Indianapolis • Jacksonville • Kansas City • Little Rock • Minneapolis • New Orleans • North Providence • Ogden • Orlando • Philadelphia • Pittsburgh • Rochester • St. Louis • Toledo

Manufacturers of Glues • Pastes • Resin Adhesives • Cements and related Chemical Products



CLEVELAND CONTAINERS MEET EVERY NEED—FOR EFFICIENT . . . ECONOMICAL . . . ATTRACTIVE PACKAGING!

The eight illustrations shown are examples of the many types of all-fibre, and metal end containers that can be furnished.

- **STURDY CONSTRUCTION** . . . Unusually wide range of sizes.
- **OPTIONAL ADDED PROTECTION** . . . Special liners which are moisture resistant and greaseproof ensure safety to various products.
- **EXTERIOR TREATMENTS** . . . Labels and colored spiral wraps may be specified for attractive and distinctive packaging.
- **MULTIPLE PACKING ADVANTAGES** . . . Cleveland Containers are delivered in high-test corrugated cartons . . . convenient to handle . . . space-saving.
- The **LARGE PRODUCTION CAPACITY** of our conveniently located plants ensure prompt customer service . . . at **LOW COST**.
- **DETAILED INFORMATION IS AVAILABLE** on all types of Cleveland Containers. Ask us for experienced suggestions, or write for special folder to help meet your needs.

1. Plain All-Fibre Can
2. All-Fibre Jacket Can
3. Metal End Slip-Cover Can
4. Metal End Friction Plug Can
5. Metal End Turn Sifter Top Can
6. Metal End Screw Top Can
7. Metal End Telescope Case
8. Unit Pack Can

Why pay more? . . . for the best Call Cleveland!

The CLEVELAND CONTAINER Co.

6201 BARBERTON AVE. CLEVELAND 2, OHIO

• All-Fibre Cans • Combination Metal and Paper Cans
• Spirally Wound Tubes and Cores for all Purposes

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Gas Light Bldg., Washington, D. C., West Hartford, Conn., Rochester, N. Y.
Cleveland Container Canada, Ltd., Prescott, Ontario • Offices in Toronto and Montreal

Complete DuPont service helps

CELLOPHANE

Problem: To give bread and other baked goods sparkling visibility . . . extra protection for freshness . . . wrapping that stays neater longer. Answer: Du Pont MST-51 Cellophane.



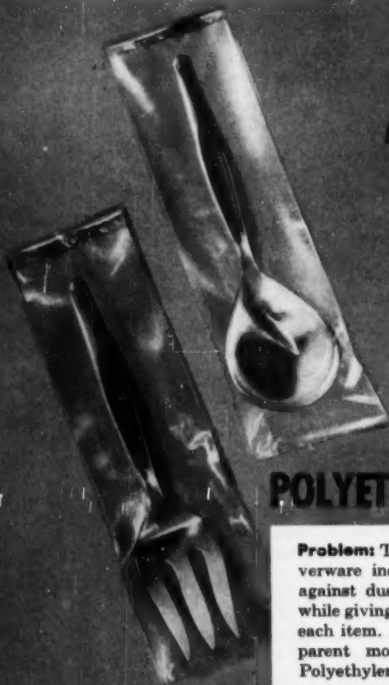
ACETATE FILM

Problem: To create an eye-catching package that shows bright colored yarns to best selling advantage. Answer: Sparkling Du Pont Acetate film laminated to an entire carton with die cut, providing large area of visibility



POLYETHYLENE FILM

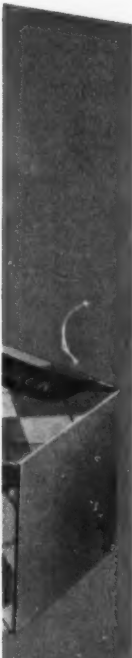
Problem: To package pieces of silverware individually . . . protect against dust and tarnishing . . . while giving transparent display to each item. Answer: Tough; transparent moistureproof Du Pont Polyethylene Film.



VISIT OUR EXHIBIT AT THE 22nd NATIONAL PACKAGING EXPOSITION—NAVY PIER, CHICAGO—APRIL 20-23

solve your packaging problem

**Du Pont works with you to choose the best film;
to get the most practical package construction;
to make your package fit today's buying trends**



You can call on Du Pont's packaging experts to help you with every angle of effective package design and construction. They'll help you select the film that's best suited to the needs of your product. Du Pont offers 115 varieties of three basic films—Cellophane, Polyethylene and Acetate. You can get a film that's highly moistureproof, or one that permits graduated moisture loss. One that's dimensionally stable, or one that conforms to irregularly shaped objects. A film that provides brilliant luster, or one that stays tough and flexible at sub-zero temperatures.

You'll get help, too, with every question of package construction. Twenty-five years of experience and continuing research on the more efficient use of packaging films support Du Pont's recommendations.

And to make sure your package is in line with modern shopping trends, you have the opportunity of reviewing Du Pont's up-to-date surveys of consumer buying habits. Get in touch with your Du Pont representative. He'll be glad to help you. Check with your converter of Du Pont packaging films for information on bags and printed materials. E. I. du Pont de Nemours & Co. (Inc.), Film Department, Wilmington 98, Delaware.

Only Du Pont gives you all these packaging aids:

- 1. WIDE VARIETY OF PACKAGING FILMS** scientifically tailored to meet the needs of varied products and packages.
- 2. TECHNICAL** assistance to help you plan the most practical and efficient construction of your package
- 3. MERCHANDISING** help through continuing nationwide surveys of buying habits, to keep your package up to date.
- 4. NATIONAL ADVERTISING** to continually strengthen consumer preference for your packaged products.

DU PONT PACKAGING FILMS

**CELLOPHANE
POLYETHYLENE • ACETATE**



REG. U. S. PAT. OFF.
**Better Things for Better Living
... through Chemistry**



So Much Always Depends on Appearance

**Products Move First and Fastest when Clay-Coated,
Custom-Made Boxboard Distinguishes Their Packaging**

PRODUCTS, no less than people, are often judged chiefly on appearance . . . with favorable first impressions often converting impulse buyers into regular consumers. Manufacturers of women's toiletries and cosmetics *know* this, and the *most* knowing ones provide their packaging the distinctive advantages of Ridgelo's superb custom-made boxboard. No other equals it in brightness, uniformity, and perfection of sizing. Available in a wide choice of finishes, colors, and coatings, Ridgelo boxboard prints and forms with exceptional ease and economy.

Ridgelo
CLAY COATED
REG. U.S. PAT. OFF.
BOXBOARDS

Custom Made

FOR FINE FOLDING CARTONS

MADE IN RIDGEFIELD, N. J. BY LOWE PAPER COMPANY

Representatives

H. B. Royce, Detroit
Philip Rudolph & Son, Inc., Philadelphia
A. E. Kellogg, St. Louis
Norman A. Buist, Los Angeles

**4 IMPORTANT REASONS WHY
R. C. ^{METAL} ^{END} FIBRE CONTAINERS
ARE YOUR BEST BUY**

**Your Four-Star Answer
to Uninterrupted
Production**

*Your Product's
in Good Shape
when it's
Packaged in
an R. C. Can*



★ **STRONG.** Durability is one of the pre-requisites of every R. C. - designed container. Asphalt-impregnated and paraffin-lined containers are only two examples of the thorough product protection offered by R. C. Packaging.

★ **COMPLETE VARIETY OF SHAPES AND SIZES.**

★ **FAST, DEPENDABLE DELIVERY.** Free from the production headaches attending material cutbacks. Four factories to serve you.

★ **LOWER COST.** In spite of these assets for smart-looking, up-to-date packaging, R. C. containers cost less to produce, less to ship.

**"Have Your Next Package
'CAN-gineered' by R. C."**

R·C· CAN COMPANY

MAIN OFFICE and Factory 103 Chambers St., St. Louis 6, Mo.
Branch Factories: Arlington, Tex.; Rittman, O.; Kansas City, Kansas
SALES OFFICES:

C. E. DOBSON, 1003 Carondelet Bldg., New Orleans 12, La. • R. C. CAN CO., 225 West 34th St., New York, N. Y. • I. C. MORRIS CO., 1125 Spring St., N. W. Atlanta, Ga. • S. W. SCOTT, 608 McCall Bldg., Memphis 3, Tenn. • E. F. DE LINE CO., 224 W. Alameda, Denver 9, Colo. • W. L. BENNETT, 126 S. Third St., Minneapolis 1, Minn. • CAN SUPPLY CO., 1006 W. Washington Blvd., Los Angeles, Calif. • GARRET P. KELLY, 316 E. Silver Spring Dr., Milwaukee, Wis.

MARCH 1953





A. M. STEIGERWALD

Gold and Silver

FOIL

embossed

Seals

HOW WOULD EMBOSSED FOIL SEALS LOOK?

The sketches we design give a perfect picture of how much beauty and dignity foil seals add to the products, anniversary, convention or similar events. How would embossed foil seals look? It's so easy to find out . . . FREE! with the coupon below.

IT'S EASY TO FIND OUT **FREE!**

How would foil seals look? On products, letterhead, labels, seals or booklet

Please send me a sketch on ☐ GOLD ☐ SILVER foil approx. size.....with the following copy

My Name _____
Company _____
Address _____ City _____
Approx. Quantity _____

Designers and Producers of Fine Labels



*GUMMED or UNGUMMED * HEAT SEAL
PRESSURE SENSITIVE ALL AT LOWEST PRICES

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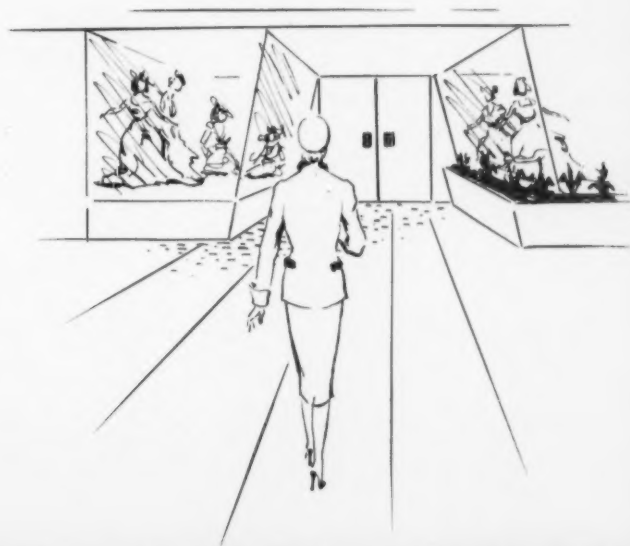
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Elegant Gifts —→



packaged in **Kromekote®**
BRAND

COLORCAST BOX WRAP

made only by

The Champion Paper and Fibre Co.







Champion and *only* Champion manufactures the "Kromekote" line of cast coated papers.

The "Kromekote" line of cast coated papers includes Box Wrap, Litho, Label, Enamel, Cover, Postcard, and Colorcast. Enamel, Cover, and Postcard are available cast coated TWO sides.

The Registered trade-mark

Kromekote

means manufactured by

THE CHAMPION PAPER AND FIBRE CO.

General Offices: HAMILTON, OHIO

EVERY BUSINESS HAS 3 MAJOR MERCHANDISING PROBLEMS: **Presenting**

Promoting

A PRODUCT OR SERVICE

for **Packaging** a product Forbes creates and produces:

inserts sleeves
cartons containers
wrappers bands
printed cellophane
labels printed foil
display boxes

for **Presenting** a product Forbes creates and produces:

wall cards
window posters
window displays
3 sheet posters banners
counter merchandisers
product demonstrators
panel inserts festoons
wall posters carcards
floor stands mobiles
hangers pennants
24 sheet posters

for **Promoting use** Forbes creates and produces:

booklets folders
dealer promotions
inserts broadsides
illustrated stamps
premium novelties
calendars catalogs
magazine inserts
books coupons
catalog inserts
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for **Building Consumer Relationships** Forbes creates and produces:

letterheads
yearly reports
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greeting cards
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this
list

... and for all these **Forbes** produces by the best choice of 3 methods:

FORBES delivers merchandising impact
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Lithography
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Visit us at the POPAI Exhibit, Palmer House, Chicago, March 31, April 1 and 2

Which of these PACKAGING IDEAS will cut *your* costs?



- Reinforced
- Waterproofed
- Six widths
- Easily dispensed by "cut-off" type machines

Our Industrial Papers Have Solved These Problems!

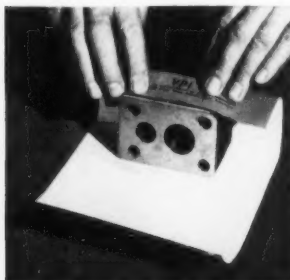
Can we help *you*?



Stronger Wrap for Big Packs

Angier's new Glass Wrap is reinforced with strong glass fibres to give *better* protection at less cost. Waterproofed; flexible; up to 96" wide.

☐ Check here for facts.



Vapor-from-Paper STOPS RUST

Saves greasing metal parts. Saves degreasing. It's Angier VPI® Wrap.

☐ Check here for facts.

Center-seam Sealing with Reinforced SNAKE TAPE

It's the *fast* way to seal cartons. And you get a *stronger* closure with only two strips because Snake Tape is reinforced to give strap-like strength! Center-seam sealing is accepted for parcel post, railway express, air express, and truck shipments; it also is accepted for carload and LCL rail shipments where rule 5, section 1 (c) of Uniform Classification applies.

☐ Check here for FREE sample & facts.

☒ Check the ideas that interest *you* and send with letterhead to:
ANGIER CORPORATION
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SINCE 1895 MANUFACTURERS OF
INDUSTRIAL PACKAGING PAPERS

MODERN PACKAGING

New high-gloss flexographic ink for face-printing on cellophane

**Matches sparkle
of film itself!**

Flexographic printers of cellophane — and users of printed cellophane, too — are enthusiastic over the new high-gloss ink developed by Bensing Bros. & Deeney. Called EXCELLOBRITE, this new ink is specially formulated to print on the face of moistureproof heat-sealing, moistureproof anchor-coated and semi-moistureproof anchor-coated types of cellophane...and give lustrous, glossy color effects which formerly could be obtained only by printing the underside of transparent film.

A sheet of cellophane printed with the new BBD EXCELLOBRITE INK is shown here so you can see for yourself the glossy, color-rich results the new ink affords. Note also the clean, sharp printing...strong adhesion...and flexibility.

Furthermore, when you use EXCELLOBRITE you get up to 25% more mileage than with conventional cellophane inks...excellent printability...and trouble-free performance on the press.

For more information about EXCELLOBRITE INK contact your nearest BBD office or write direct to Bensing Bros. & Deeney, 3301 Hunting Park Avenue, Philadelphia 29, Pa.



EXCELLOBRITE

high-gloss flexographic ink

*It matches the sparkle
of the film itself!*



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Longer Shelf Life and Sales Appeal for

Paper Specialties

...with Celanese* Acetate Film wraps

Even the slowest moving specialties stay fresh and crisp looking indefinitely when wrapped in Celanese acetate film. It protects your products against handling, during shipping, and at the store counter.

Crystal clear, non-fogging Celanese acetate gives your products a chance to speak for themselves . . . sell themselves! Low-cost Celanese wraps stay flat . . . won't show pull lines . . . do not tend to cockle.

Make certain your products have the extra selling lift needed in today's "help yourself" market. Ask your supplier about Celanese acetate film or write: Celanese Corporation of America, Transparent Films Department 108C, 180 Madison Avenue, New York City 16, New York.

Canadian affiliate, Canadian Chemical & Cellulose Company, Ltd., Montreal and Toronto.

*Reg. U.S. Pat. Off.

Celanese^{*}

ACETATE FILMS

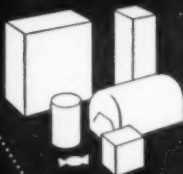
VISIT CELANESE BOOTH #403.
PACKAGING EXPOSITION, NAVY PIER,
CHICAGO. APRIL 20-23, 1953



A HALF CENTURY OF SERVICE

NEWARK PACKAGING PROTECTS PROMOTES

SELLS YOUR PRODUCT
YOUR PRODUCT...
GOOD WILL



Whether your needs are large or small . . . our half century of know-how . . . our research department . . . our art and engineering staffs . . . are at your service to help solve your packaging problems . . . without obligation.

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- LAMINATED ALUMINUM FOIL
- BARRIER MATERIALS
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- SHEETS
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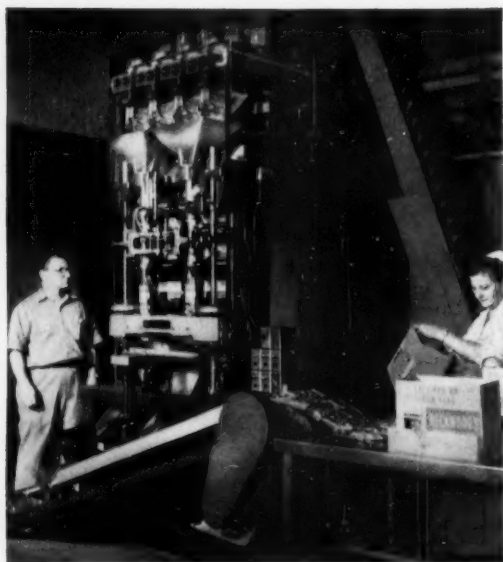
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ROCKWOOD CHOCOLATE

USES THE NEW NET WEIGHT SCALE FEED



by **TRANSWRAP**
for

- A complete packaging plant in one machine.
- Accuracy of feed — exceeds all other feeding methods at full production.
- Lower costs — least labor cost per unit.
- Attractive packages — from printed roll stock.
- New markets for quality chocolate — in the low price packaged candy field.

Rockwood & Co., makers of quality chocolate, have selected TRANSWRAP's new Net Weight Scale Feed with the Model "B" TRANSWRAP as the most practical method of producing low cost packages of their products for the five to twenty-five cent market. The TRANSWRAP "complete packaging plant in one machine" is the only equipment of its type in the field. Rockwood Chocolate, with this modern installation, now offers their distinctive "flavored chocolate" packages to meet every popular price range.

The new Net Weight Scale by TRANSWRAP can give YOU a better, faster, more accurate production if you merchandise gum or wrapped candy, nuts, crackers and any items sold by weight. Contact TRANSWRAP or your local agent TODAY.

SEE THIS SCALE IN OPERATION AT THE '53 PACKAGING SHOW.



TRANSPARENT-WRAP MACHINE CORPORATION
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TRANSWRAP



GOODBYE GLUE POT BLUES



Adhesives Speed Up Labeling Over 400% Thanks to Monsanto Plasticizers

Bottle labeling zoomed from 60 labels a minute to 300 a minute, when special heat-seal adhesives using Monsanto plasticizers were adopted by one manufacturer.

Today, slow, old-fashioned gluepot methods are out. The new trend is to fast emulsion, hot melt, heat-sensitive time log adhesives—and Monsanto plasticizers are essential to all of them. You

will find these plasticizers effective in adhesives based on polyvinyl acetate, zein, casein polyvinyl butyral, styrene, ethyl cellulose and polyvinylidene chloride.

For information write MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 800 North Twelfth Blvd., St. Louis 1, Missouri.

PLASTICIZERS



Serving Industry... Which Serves Industry

CROMWELL

proudly presents its new
line of protective papers

FLEXIBLE-LAMINATED IMPREGNATED

"Quality Built In"

Now Cromwell—famous for quality for 33 years, laminates finest Kraft to finest Kraft in a wide variety of papers for industrial, agricultural, construction and packaging uses. Unique new equipment, specially designed by Cromwell, gives you the most consistent uniformity in highest quality laminated papers.



**Cromwell embosses instead of creping—
and embosses after lamination . . .**

Creping breaks down Kraft fibres and leaves weak spots. Cromwell embossing renders Kraft just flexible enough to provide maximum tear, puncture resistance and a conforming wrap—without weakening the Kraft! Post laminant embossing ensures a perfectly uniform sheet with perfectly uniform lamination.

CROMWELL FLEX-LAM

FOR: Waterproofness • Flexibility • Conforming Packaging . . . Similar to Flex-Fibre, but without glass fibre reinforcement. An ideal material where ordinary strength is indicated.

CROMWELL FLEX-FIBRE

FOR: Waterproofness • Strength • Flexibility • Puncture and tear resistance • Conforming Packaging . . . flexible enough to conform to the product, yet strong as a flat sheet. Acid, mold and wickproof glass fibres are swirled into the waterproof laminant, and the sheet made flexible after reinforcing and lamination.

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FOR: Waterproofness • Strength • Puncture and tear resistance . . . a flat non-flexible laminated sheet reinforced by swirling acid, mold and wickproof glass fibres into the waterproof laminant.

CROMWELL FERRO-PAK

FOR: Corrosion Prevention . . . a Volatile Corrosion Inhibitor paper. Invisible gases emanating from the paper protect ferrous metal parts from corrosion—even when those metal parts are not in actual contact with the inhibitor.

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Write for Cromwell's new folder of Laminated Paper Samples and completely detailed descriptions of each.

Cromwell laminated papers are available in rolls, sheets or bags

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TELEPHONE WEMBLEY 6011

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Throughout all stages of manufacture, every roll of foil made by Fisher's is *automatically controlled* for gauge consistency by the latest beam gauge. Send today for wide range of samples or ask our representative to call.

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foils



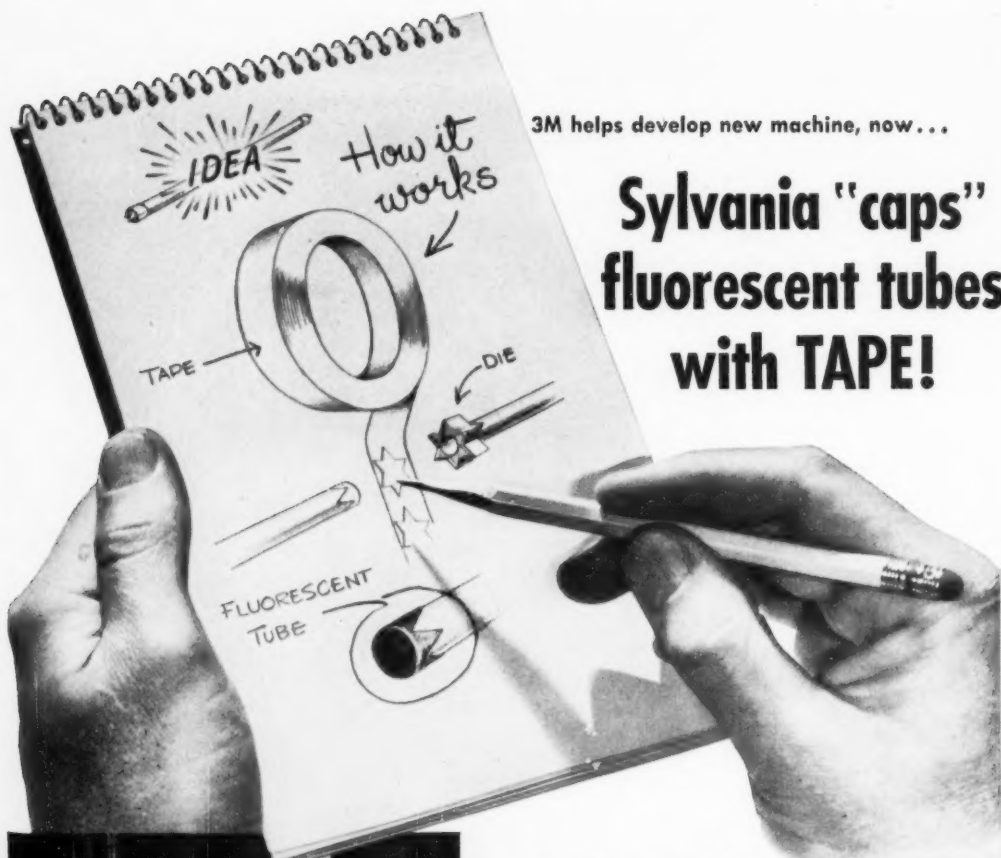
In every field there are recognized leaders to whom quality of product is the supreme consideration.

To such leaders in the packaging and converting fields, Kidder presses and slitters have long constituted the standard by which other equipment is judged. In Kidder multi-color rotary presses for flexographic (aniline), rotogravure, and letterpress, nothing is spared to achieve the known requirements for perfect printing. In slitting, Kidder's shear-cutting action results in clean, accurate, dustless rolls.

For information concerning the finest equipment to fill your converting needs, write:

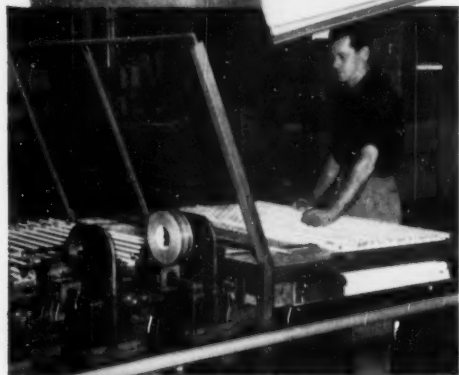
KIDDER PRESS COMPANY, INC., DOVER, NEW HAMPSHIRE • EMPIRE STATE BUILDING, NEW YORK 1, NEW YORK
MACHINERY SERVICE CO., LOS ANGELES 22, CALIFORNIA

Kidder
PRESSES • SLITTERS



3M helps develop new machine, now...

Sylvania "caps" fluorescent tubes with TAPE!



OPERATOR INSPECTS the tubes after capping with "Scotch" Acetate Fibre Tape No. 750.

FROM A 3M SERVICE NOTEBOOK: Engineers at Sylvania Electric Products Co., Danvers, Mass., after a review of 3M tape-applying principles and schematics, developed a remarkable new machine. It automatically die-cuts and applies a protective, dust-proof cap of "Scotch" Acetate Fibre Tape No. 750 to the ends of fluorescent tubes. The operation is simple, speedy. Similar machines are available to solve *your* tube-sealing and capping problems.

New techniques with tape are our business. We design and engineer more pressure-sensitive tapes and tape dispensers than any other manufacturer in the world.

Why not let a 3M Service Representative show you how tape can work for you? Just write Minnesota Mining & Manufacturing Co., Dept. MP33, St. Paul 6, Minnesota. No charge or obligation.

Tape does it quicker, better, cheaper!



The term "Scotch" and the plaid design are registered trademarks for the more than 200 pressure-sensitive adhesive tapes made in U.S.A. by Minnesota Mining & Mfg. Co., St. Paul 6, Minn. — also makers of "Scotch" Sound Recording Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. General Export: 122 E. 42nd St., New York 17, N.Y. In Canada: London, Ont., Can.



HEAVY DUTY

SEMI-AUTOMATIC TUBE FILLER IN THE

The new Colton No. 160 is the *FIRST heavy-duty*, full range tube filler in the low-price field.

It is the *ONLY* low-priced tube filler with the heavy construction necessary for handling heavy, ropery materials such as caulking compounds, etc. And, being a full range machine, it also fills every consistency of cream, paste and liquid, as well as powders, into tubes, jars, bottles or cans.

It provides semi-automatic, continuous operation with one attendant. New, direct-motion feeding and crimping mechanism. Famous Colton filler head and many other quality features as on higher-priced machines. Bench or stand type available. Capacity 36 tubes per minute; tube sizes up to $1\frac{1}{2}$ " x 7".

We suggest you write for specification sheet and catalog of sixteen cost-cutting items of packaging equipment including a complete line of hand-operated equipment.

COLTON TUBE FILLER AND CLOSER

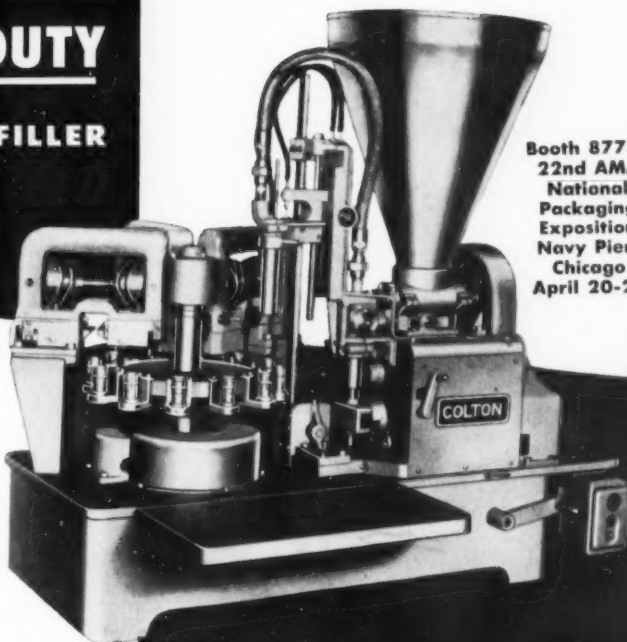
No. 180

Companion machine to No. 175 with the same speed, precision and economy but designed for larger tube dimensions. Tube sizes up to $1\frac{3}{4}$ " x $7\frac{1}{2}$ ". Capacity up to 90 tubes per minute. Complete range of auxiliary equipment.



SPECIALISTS IN PHARMACEUTICAL AND PACKAGING MACHINERY FOR NEARLY 70 YEARS

Offices in Principal Cities



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Navy Pier,
Chicago
April 20-23

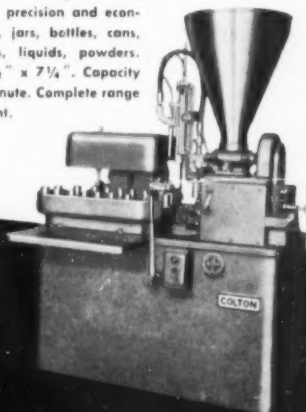
ARTHUR

PLANT NO. 2
PLANT NO. 3

COLTON TUBE FILLER AND CLOSER

No. 175

Modernized version of the world's most popular automatic tube filling machine; unmatched in speed, precision and economy in filling tubes, jars, bottles, cans, with pastes, creams, liquids, powders. Tube sizes up to $1\frac{1}{2}$ " x $7\frac{1}{4}$ ". Capacity up to 85 tubes per minute. Complete range of auxiliary equipment.





BAG BIGGER SALES with NIBROC® WHITE PAPER

Pack more eye-appeal in your package. Have more hands reaching for your product in self-service stores . . . where 76% of today's grocery dollars are spent. Stop shoppers with the best in bag and sack papers—Nibroc White®!

With self-service, your package has to come alive—speak for itself—or lose out in this fast-moving competitive market.

Nibroc White brings out the best in printing inks—gives your package a man-size amount of color—for bold display—increased visibility. It makes a bag that is really tough—one that protects your product every step of the way.

The beauty, durability and protective qualities of *any* package can be no better than the basic properties of the paper from which it is made. Our Technical Service staff will work with you to develop a Nibroc paper engineered to meet your specific needs. Write Dept. RD-3, Boston.

^aSold only to paper converters.

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MODERN PACKAGING

"DOC" had a Packaging Problem, too



***Clearsite*^{*} solved it for him...**
...they can solve it for you

"Doc," the druggist, has to protect his pharmaceuticals. That's part of his ethics. He has to merchandise them, too. Celluplastic transparent containers solved both problems simultaneously for him. They'll do the same for you.

Whether you're selling pills or drills, fish hooks or lipsticks, package them in Clearsite Transparent plastic con-

tainers and you'll put them on the path to greater sales. They complement and protect your products. Any lettering, design or trade mark can be permanently printed in colors right on the container. They're feather-light, moisture-tight, priced right. Available in many sizes and adaptable to a wide variety of closures.

WRITE TODAY FOR DESCRIPTIVE LITERATURE

CELLUPLASTIC CORPORATION

General Offices: 50 Avenue L, Newark 5, N. J.

TRANSPARENT

***Clearsite*^{*}**

PLASTIC CONTAINERS
that Sell

*REGISTERED TRADE MARK



Ma meets her match—

**in Pillsbury mixes ...
packaged by PNEUMATIC**



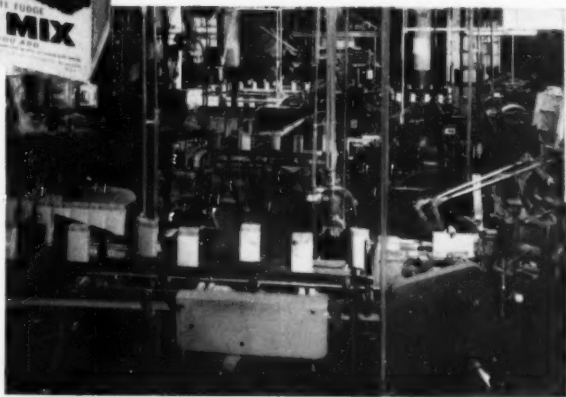
Mother is the first to admit it—Pillsbury mixes make it easy for almost anyone, these days, to equal her all-time best in cake and pie baking!

Putting the "makings" in a container that will protect them 'till ready for use, calls for a special kind of packaging technique. Pneumatic supplies it. With Pneumatic's famous Double Package Makers on the job, each Pillsbury container becomes a "package within a package", to provide maximum protection for the delicately and skillfully blended contents.

The story is the same with practically every other leading producer of prepared flours and mixes. All obtain highly satisfactory results with Pneumatic equipment—at a "lower cost per container". Whatever your packaging requirements, chances are good that Pneumatic can provide all the machines you need for completely automatic production.

PNEUMATIC SCALE CORP., LTD., 82 Newport Ave., Quincy 71, Mass. Also: New York; Chicago; San Francisco; Los Angeles; Seattle; Leeds, England.

View of packaging room at Pillsbury's Springfield, Illinois plant, showing Pneumatic Double Package Maker equipment in operation.



Packaging and Bottling Equipment



The ultimate of
quality,
care,
craftsmanship
...go into
Rowell Boxes

The creative art of the master pottery-
maker finds its counterpart in the exacting
skill Rowell devotes to making fine
set-up boxes . . . a skill known by
packagers everywhere.



E. N. Rowell Co. Inc.

Mfrs. Fine Paper Boxes
Batavia,
N. Y.

"Happy employees
make good
products."

...we said in this
letter which
tips our hats
to our
employees

As the result of
this letter, we've
received so many
complimentary letters,
we're blushing!

Many passed our booklet on
to their personnel departments
feeling they could use a similar
employee relation effort.

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from packaging by...*

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Central States Paper & Bag Co.

- ☐ Send me your Employee Booklet.
☐ Yes, we'd like to know what good products your
"happy employees" make for our industry.

Name _____

Title _____

Company _____

Address _____

City _____ State _____ M-3

*Central States
Paper and Bag Company, Inc.*
MANUFACTURERS AND DISTRIBUTORS
5221 NATURAL BRIDGE AVE.
ST. LOUIS 15, MO.

Dear Mr. Jones:

Enclosed is a booklet we give to every one of our new employees, to welcome them to Central States. No, we're not offering you a job with Central States, though we would like to have you as part of the Central States "family". That's why we are sending you this booklet . . . to let you know a little more about us.

Central States is a friendly, happy place to work, and we have high regard for our employees. You'll note that we do all we can to make them feel at home and enjoy their work and their surroundings. Happy employees make good products.

We feel you're interested in doing business with a firm that has high regard for both employees and customers. Perhaps reading this booklet will bring us a little closer. May we welcome you . . . as one of our valued customers . . . to the Central States "family"?

We'd all enjoy receiving any comments you might have on our employee booklet.

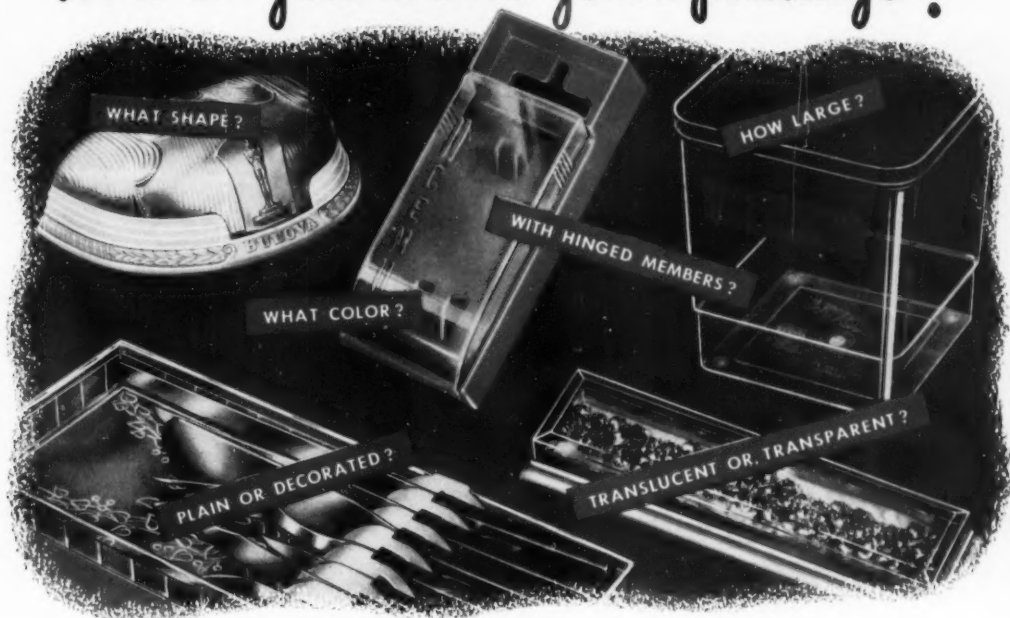
Cordially,

CENTRAL STATES PAPER & BAG CO.



If you would like a
copy, we'll be glad to send you
one. Just mail the coupon.

How do you want your package?



USE KOPPERS POLYSTYRENE!

YOUR PRODUCT, of course, will dictate the particular size, shape, color and arrangement of details that will most effectively attract the attention of potential purchasers. And in relation to your product, you should consider the unusual adaptability of Koppers Polystyrene. It can be formed to any practical shape and size. Its dimensional and heat stability assure exact fit between related members, and the beauty and stability of its color is unrivaled.

On the technical side, the excellent molding characteristics of Koppers Polystyrene result in fewer

weld lines, improved strain pattern, more uniform plasticizing of material in the cylinder, faster molding cycles resulting from setting at higher temperatures, and a more uniform cylinder feed.

We welcome your inquiries as to the suitability of Koppers Polystyrene for your product package. Technical data on its properties are available upon request. As always, we want to work with you to obtain the best results from your use of Polystyrene . . . to create novel designs, eye-catching beauty and maximum sales appeal in your packages at an economical cost.

Koppers Polystyrenes give you all these advantages

Low cost

**Light weight—
more pieces per pound**

Excellent dimensional stability

Exceptional clarity

**Heat-distortion temperature
range: 165°-200°F.**

**Good chemical
and moisture resistance**

Tasteless and odorless

Unlimited color range



Koppers plastics make Many Products Better and Many Better Products Possible.

Koppers Plastics

KOPPERS COMPANY, INC., Chemical Division, Dept. MP-13, PITTSBURGH 19, PA.

SALES OFFICES: NEW YORK • BOSTON • PHILADELPHIA • CHICAGO • DETROIT • LOS ANGELES

MARCH 1953

65

SAVE HALF YOUR MONEY

...own a

Hayssen

automatic

TEXTILE WRAPPING MACHINE

A Hayssen unit costs you less than you think and occupies about half the usual floor space. This machine wraps 35 or more packages per minute with one operator. You get a neat, tight, uniform package with electric-eye registration of printed overwrap... extra protection for your product and increased sales appeal.



A FULL LINE OF MACHINES WRAP

Sheets, Pillow Cases, Bolts of Fabrics, Curtains, Underwear, Shirts, Towels, Handkerchiefs, Hosiery, Batting, Yarn

The Hayssen Textile Wrapping Machine handles heat-sealing cellophane, pliofilm and polyethylene. It overwraps cartons, trays, flat cards and u-boards... handles the most delicate fabrics and fluffy material like cotton and wool bats. Special attachments (electric eye, roll-type top labeler and

printer, card or u-board feeder) are available.

Over 42 years' experience gives Hayssen machines unmatched performance, low first cost, overall economy of operation and maintenance. Many Hayssen units are in use today that were purchased over 20 years ago.

IT PAYS TO WRAP THE HAYSSSEN WAY

Hayssen MFG. COMPANY

Dept. MP-3 SHEBOYGAN, WISCONSIN

Since 1910, One of the World's Largest Manufacturers of Wrapping Machines



BAKED GOODS



MEATS



TEXTILES

VEGETABLES

FROZEN FOODS

ODD SHAPES

CANDY

ICE CREAM

DAIRY

PAPER

WRITE for folder on Hayssen Textile Wrapping Machines. Tell us your wrapping problems —we have the answer.



In supermarkets and self-service counters where your package is the only salesman on duty—you need the superior salesmanship of Milprint packaging! It's the combination of eye-catching design, sparkling color and precision printing that radiates "buy-me-now" appeal... all but puts the package in the shopping cart!

The success of Milprint packages in winning sales reflects the wide experience and ability of Milprint artists and printing craftsmen... plus the widest variety of packaging materials and printing processes available anywhere. For packages that work harder to win more sales for you, call your Milprint man—first!

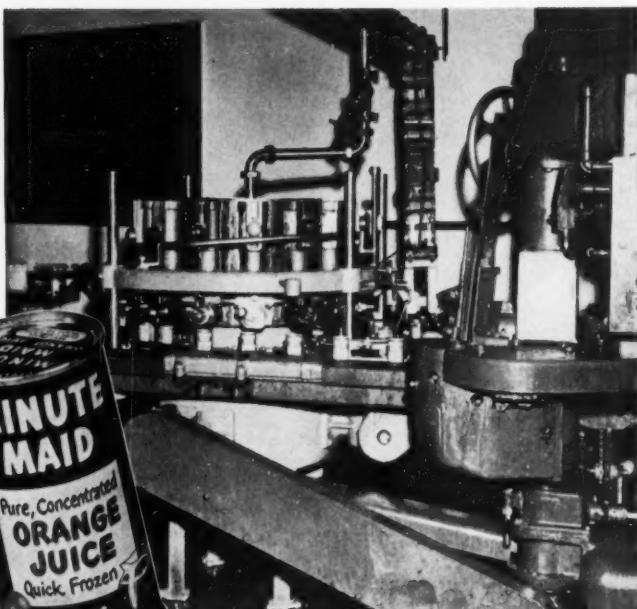
Milprint INC
PACKAGING MATERIALS
LITHOGRAPHY & PRINTING

General Offices, Milwaukee, Wisconsin
Sales Offices in Principal Cities

This insert printed by Milprint

Printed Cellophane, Pliofilm, Polyethylene, Acetate, Glassine, Foils, Folding Cartons, Bags, Lithographed Displays, Printed Promotional Material

How High-speed Filling *Pays off* for **MINUTE MAID**



ECONOMY IN ACTION—This Pfaudler piston filler is turning out hundreds of cans of Minute Maid frozen orange juice per minute—and costs little to operate, too.

To keep pace with the demand for Minute Maid frozen orange juice, speed is an important factor in Minute Maid Corporation's packing operation.

And they have found Pfaudler 14- and 21-station rotary piston fillers—which fill up to 600 containers per minute—ideally suited to their high-speed, large volume operations. Fast filling helps to keep costs down, too, because less labor time is required per packaged unit.

ACCURACY also helps to keep filling costs low at Minute Maid Corporation. On their Pfaudler fillers they can adjust the volume of each fill to within 1/10 of an ounce. This

means uniform packaging—without spillage. And the possibility of wasted product is eliminated by Pfaudler's "no-can—no-fill" feature.

EASY CLEANING means lower maintenance costs. This is possible with Pfaudler fillers because the pistons and cut-off valves can be readily removed by hand—no tools are needed. And to assure longer life, there are no wrist pins or connecting rods to wear out.

In case you will not have a chance to see the efficiency of these high-speed Pfaudler fillers demonstrated at the Packaging Exposition, write us today for the full details.

Pfaudler

THE PFAUDLER CO., ROCHESTER 3, NEW YORK
Engineers and Fabricators of Food Processing Equipment

Gravity Fillers
Piston Fillers
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Dewaterers
Vacuum Pans
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WORLD PREMIER

A NEW Pfaudler piston filler incorporating many advanced features will be shown for the first time at The National Packaging Exposition, Navy Pier, Chicago, April 20-23.

SEE IT at the Pfaudler Booth—No. 107

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FOR YOUR

CHOCOLATES
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Quality **OLIVE CAN COMPANY** *Service*

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Tupper Seal, air and liquid tight flexible covers fit, and are included in the sets of all Tupperware Canisters.



The Tupperware 50 oz. Canister is "standard equipped" with the Tupper Seal, air and liquid-tight flexible Pour All cover.



The Tupper Seal, air and liquid-tight flexible Pour All cover is used on every Tupperware 20 oz. Canister.



The Tupper Seal, air and liquid tight, Pour All cover as a cover for 46 oz. cans; Tupperware Sauce Dishes and other containers of metal, glass or pottery. Foods easily dispensed without removing entire cover.



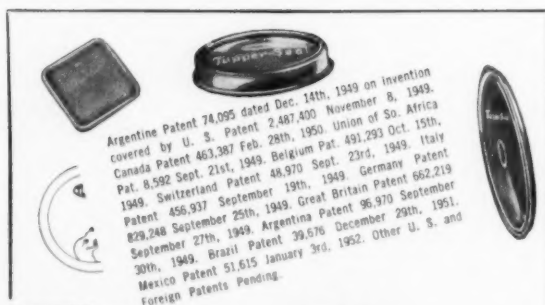
The Tupperware Wonder Bowls are usually fitted with Tupper Seal, air and liquid-tight covers.



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Argentine Patent 74,095 dated Dec. 14th, 1949 on invention covered by U. S. Patent 2,487,400 November 8, 1949. Canada Patent 463,387 Feb. 28th, 1950. Union of So. Africa Pat. 8,592 Sept. 21st, 1949. Belgium Pat. 491,293 Oct. 15th, 1949. Switzerland Patent 48,970 Sept. 23rd, 1949. Italy Patent 456,937 September 19th, 1949. Germany Patent 829,248 September 25th, 1949. Great Britain Patent 662,219 September 27th, 1949. Argentina Patent 96,370 September 30th, 1949. Brazil Patent 39,676 December 29th, 1951. Mexico Patent 51,615 January 3rd, 1952. Other U. S. and Foreign Patents Pending.

TUPPER! Seals

air and liquid-tight, flexible covers for Tupperware Tumblers, Canisters, Wonder Bowls, Cereal Bowls and many another container of glass, metal and pottery, the contents of which it is desired to keep fresh and wholesome.



TUPPER!



FORMAL NOTICE!

9th November, 1949

EXCLUSIVE!

U. S. Patent #2,487,400

The Tupper Corporation has attained a position of leadership in this industry by incurring great expense and expending painstaking effort in the development, design, manufacture and exploitation of its many world-known products.

The Tupper Corporation further has anticipated the inevitable attacks to which leadership is subject and has taken measures provided by law to preserve the creative rights to its products, methods and design by patent protection both in the United States and abroad.

Tupper Seals for Tupperware shown in this advertisement are just a few of the forms covered in this manner and are specifically covered by U.S. Patent #2,487,400.

Only the Tupper Corporation, by U.S. Patent #2,487,400 has the right to make, use and vend container closures in connection with any and all types of containers throughout the United States and its territories as covered by the claims of the Patent.

Tupper Corporation will protect, according to law, the exclusive rights above granted

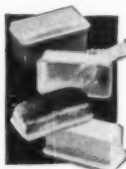
TUPPER CORPORATION

TUPPER CORPORATION



There's a Tupper Seal, air and liquid-tight flexible cover for Tupperware 2, 5, 8 and 12 1/2 oz. Tumblers too, and these Tupper Seal, covers fit many other containers of metal, glass and crockery.

The Tupper Seal, air and liquid-tight flexible Por Top cover, specially designed as a dispensing cover for specified diameters of containers holding foods such as syrups, salad dressings, catsup.



The cover of the Tupperware Bread Server which serves as a bread tray also is designed to give similar results as Tupper Seal, air and liquid-tight Flexible covers. Keeps contents fresh as no other such container.



When equipped with Tupper Seal, air and liquid-tight, flexible covers, Tupperware Cereal Bowls serve many another purpose.



The Tupper Seal, air and liquid-tight flexible cover made for Tupperware 8 oz. Tumblers also fits and is sold with all Tupperware Funnel as a base when funnels are used as storage containers.

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MODERN PACKAGING


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No sales talk sways her judgment in the self-service store. It's her eyes, not her ears, that determine her selections. Food products in attractive packaging, brand labels in brilliant colors, catch her eye . . . open her purse. For a bigger share of America's annual

\$18,106,000,000 self-service food store business, look to your packaging. And look to Marathon, leaders for 40 years in designing, producing and imprinting packages that sell food.



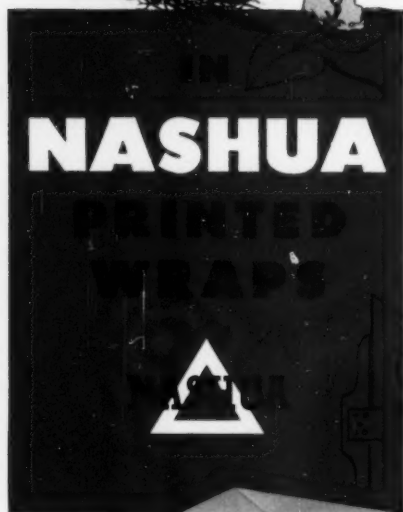
Marathon Corporation, Menasha, Wisconsin: from pulp to finished package, Marathon's facilities include—assured pulpwood sources—pulp and paper plants—package-making plants—ink, engraving and printing plants—years of pioneering research, creative design and merchandising experience. 

See the latest in merchandising ideas and packaging developments for foods and specialties at the Marathon exhibit, Booth 429, National Packaging Exposition, Chicago, Illinois, April 20-23, 1953.

 **Marathon** Corporation
packaging that sells food



Sure Signs of Spring



Retail sales respond to packaging in gay pastels. Ideas, like seeds, grow from a background rich with past success.

You'll find our field of packaging is broad. Products made by Nashua reach homes across the nation as carton wraps, as food and drug labels, as sealing tapes and printed bags, as bread wraps and merchandising bands. Hospitals use sugar, powders, and medical supplies packaged in Nashua printed papers.

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VOLUME 26

NUMBER 7

MARCH 1953

Mechanization milestone

Pioneering a new
super-packaging machine,
Mayfair's dried fruits
point a solution to
a common marketing problem

MACHINE SO BIG it has to be fed from floor above makes pillow-type packages from printed film and fills them with hard-to-handle prunes, eliminating bags and costly hand filling. It cuts cost of transparent bag of dried fruit below that of standard carton for the first time in the industry's history.



Countless Americans daily toss nickels onto store counters for a familiar transparent bag of peanuts. Few ever consider the modern miracle that brings them an accurately weighed and protectively packaged product for so small an amount. Even fewer realize that what they are buying, in packaging parlance, is not a bag but a "pillow"—a tube of film ingeniously formed, filled, sealed at both ends and separated from its fellow packages on one single machine.

Food manufacturers whose products are more bulky or less easy to handle than peanuts have long re-

garded the economies of this method with envy. Such firms may find significant news in the fact that this same packaging principle has been adapted successfully to dried fruit at San Jose, Calif. A fully automatic unit of a new type is now in daily operation at the Mayfair Packing Co. there, winning savings which are not "peanuts" no matter how you look at them.

In addition to its significance to the food industry, this machine is of wide interest because it marks the first commercial installation of an entirely new model of one of the most wide-

Modern packaging



An ingenious feeder-weigher makes prunes flow like peanuts

TAMING the product occurs at receiving bin on floor above machine. Fine water spray takes stickiness out of prunes while rubber-covered roll—exactly one prune high above feed belts—breaks up lumps, assures even product flow.

VIEW ATOP MACHINE shows fruit proceeding single file along shaker troughs toward scales at left. Electric-eye impulse actuates steel fingers to close off shaker trough at exact instant scale makes its weight and stop product flow all the way back to the feed belt.

THREE-QUARTER view from side at top of machine shows nearest shaker trough closed off by curved steel finger after scale has made its weight; second trough still flowing and third closed. Fourth scale, not visible, also is filling. Two troughs and scales, individually controlled, feed each of unit's two filling heads.

ly known transparent-package-making machines. With its special scale attachment it will, for the first time, handle non-free-flowing products such as dried fruits. It is said to be the first machine of its type that will imprint as well as form, fill and seal a pillow-type film package and the first to handle all types of films (K-202 cellophane, polyethylene, Pliofilm and saran) through a choice of resistance, impulse or electronic heat-seal units. Its package-size capacity has been greatly extended.

The Mayfair innovation is a striking example of shifting to meet changing merchandising conditions—a problem faced by thousands of packagers today.

With this development, Mayfair has been able to effect labor savings of 75% and increase both production and weight accuracy for its Saratoga brand dried fruits. Further economies soon will be gained in a dramatic reduction of packaging-material inventory requirements.

The industry picture

This news, to be appreciated, must be examined in terms of the industry where it has occurred. Flexible transparent-film packages have been both a boon and a burden to U.S. dried-fruit packers, located mainly in California. Sales-wise, the transparent bag of moist, tender fruit has been a lifesaver. Production-wise, because of several difficulties, it has been a costly headache.

Before World War II, suitable water-vaporproof packaging films were virtually unknown on the dried-fruit scene. One such film, Pliofilm, made a brief appearance in the early '40s and then went off-stage because of defense needs. From a merchandising standpoint, absence of these films mattered little during the war. Because of canned-goods rationing and stepped-up domestic and export needs, dried fruits then found a ready market.

At war's end the picture changed drastically. Foreign countries, which once bought 40% of U.S. dried fruits, now rated them as non-essential luxuries in a dollar-short era and restricted their purchases. This meant, in 1946, for example, that packers had the equivalent of more than 400 million extra pound packages of dried fruit to sell at home or not at all. It was at this bleak point, like the traditional troop of U.S. cavalry in any

Western movie saga, that transparent packaging films came to the rescue.

No more opportune moment could be imagined. Veteran packers like Mayfair were eagerly seeking packages with more sales appeal. By letting shoppers actually see the color and feel the softness of today's quicker-cooking dried fruits, the so-called "visible packs" promised to provide greater sales.

That promise has been kept. Use of visible packs has grown from almost nothing directly after the war to where they now carry a very significant proportion of all consumer-packaged dried fruits.

Contrary to initial fears of some packers, success of the visible packs has not been gained at the expense of other established package types. Instead, they have created their own

market, introducing dried fruits to young housewives and other new buyers without cutting into the old pattern of purchasing the product in cartons and other non-transparent packages by older customers. Visible packs, in fact, seem to stimulate sale of all dried fruits, regardless of package type. Store tests supervised by the California Dried Fruit Research Institute show that properly located joint displays of visible packs and cartons can boost sales as much as 105%, with the proportion of package types sold remaining largely the same.

Such sales results have spurred widespread adoption of transparent bags by the dried-fruit industry, even though bag packaging requires considerably more manual labor than carton packaging. Worthwhile strides have been made toward mechanizing

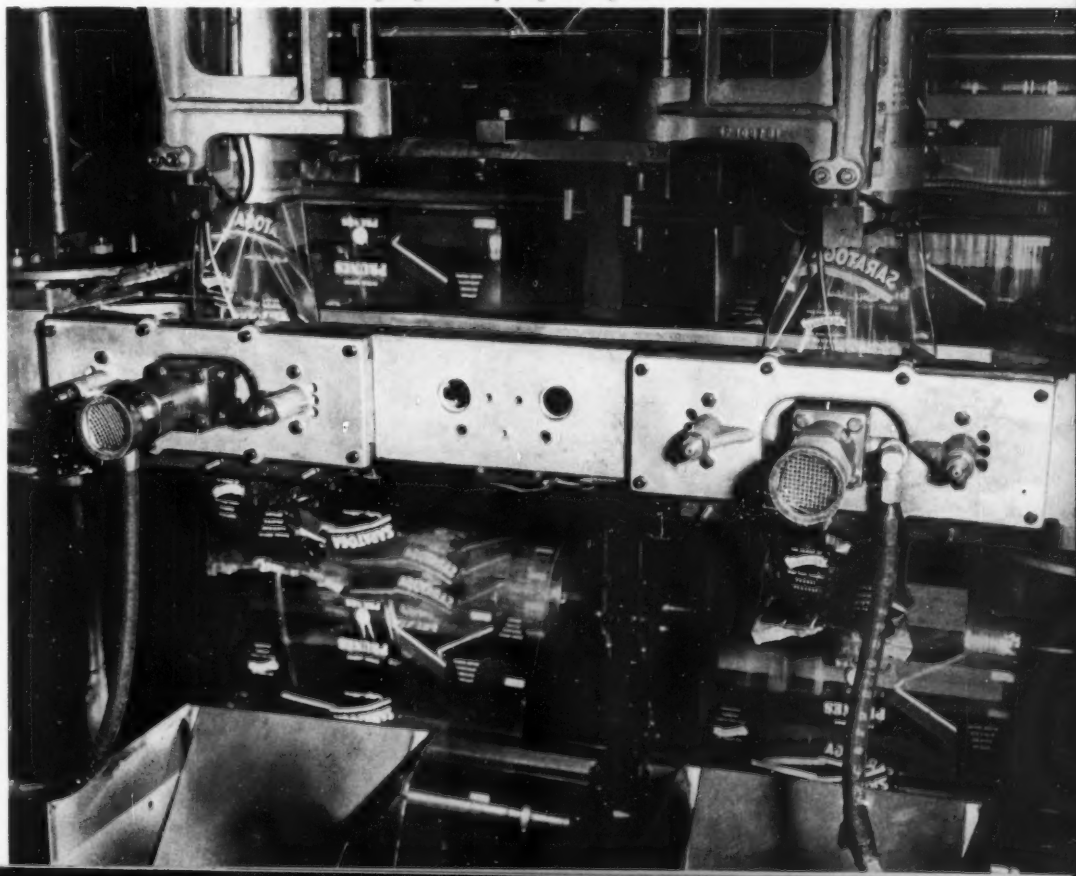
bag lines, but until advent of the new method to be described here, even the best arrangements were only semi-automatic.

The machine problem

Prime barriers to fully automatic dried-fruit bagging have been the handling characteristics of the fruit, which tends to stick together in lumps defying most mechanical net-weighting devices, and the very flexibility of the bags, which makes them unsuitable for automatic feeding. Thus the usual industry bagging line, as at Mayfair's plants, long ago evolved into the following procedure:

Workers at bag-making machines produced enough bags to cover the quantity of fruit to be packed. At the bag line, two girls placed the bags in pockets of an endless chain con-

PACKAGE MAKING is shown in this view from front of machine. Film from rolls below feeds to top of the machine and is formed into a tube over large, round mandrels, which are also filling heads. Vertical heat-seal bars appear at the top of photo. Movable horizontal bar in the center houses heat-sealing devices for closing off ends of the tubes, as well as electrically heated thin wires which slice through the seal area to detach finished, filled packages. Packages hanging below the bar have just been filled and are being sealed at the top prior to cut-off; tube of film above has been sealed across the bottom and is ready to receive product. Small metal tubes inside the film deliver fumigant gas as the package is being filled.





PACKAGES FLOW from machine through a port direct to casing—the only hand operation. Output averages 44 bags per minute. Labor saving is 75%, speed is up 25% and the weights are more accurate.

veyor. This belt carried the bags, open end up, under a trough which one worker kept filled with fruit while another rapidly pushed it into the mouths of passing bags. Thus filled, the bags were conveyed on past four girls manning simple over-under check scales. Here fruit was added or subtracted by hand to bring the bags to proper net weight. They were then returned to the conveyor and on to four more girls who folded the bag tops and fed them into a belt-type heat sealer.

From the heat sealer, under this old "standard" method, closed bags were discharged at a casing station, where two more girls placed them in shipping cases. This procedure was the one used by Mayfair for printed bags bearing its Saratoga brand. Plain unprinted bags with a heat-seal tent label would require more help at the heat sealer, where such labels are put on by hand. Total workers for the printed-bag line, not counting personnel at the bag-making machines: 14. Their output: an average of 35 bags per minute.

In contrast, Mayfair's new automatic unit produces an average of 44 bags per minute. It requires only four workers—a man to maintain product supply, a machine operator and two girls placing the completed packages into the shipping cases. This is based on the one unit May-

fair had in full-scale use at this writing. Installation of a battery of such machines, as planned, will permit the filler and the machine operator to tend several units at once, reducing even further the labor-to-package ratio.

More savings will be gained by the packer through reduction of his printed-film inventory. Currently the company, because of minor text differences on fruit grades and weights, stocks 23 different printed versions of its basic bags. When this inventory—which has reached a value of \$135,000 at times—is used up, Mayfair will be able to use just five basic designs for prunes, peaches, apples, pears and apricots. At the time of packing, through addition of a printing attachment, it will imprint grade and weight information on this basic roll stock.

Since installing the first unit last fall, Mayfair has played host to most of California's leading dried-fruit packers.

All of them wanted to see if the machine would perform as they had heard; all wondered how it had succeeded where others had failed. They found two major reasons for its success: scales with a new way of governing the hitherto balky flow of fruit before it reaches the actual weighing stage and the new all-in-one automatic packaging machine, much like those

already handling peanuts and other small products, but capable of producing much larger package sizes.

Mayfair's solution

These units, made separately by a Western and an Eastern firm, have been so closely integrated in Mayfair's plant that they look and function like one machine. Yet each has its job. The task of the scale begins on the floor above the packaging department, where lumpy, sticky, dried fruit is transformed into a steady, free-flowing stream. This remarkable change begins at a receiving bin and continues on along four parallel feed belts separated by stationary dividers exactly one prune high.

Dried fruit is dumped into the bin by an operator. Before it can reach the feed belts it is sprayed with a fine mist of water and passed under a ridged, rubber-covered, breaking-and-leveling roll. This roll breaks up any lumps of dried fruit and delivers the product to the moving feed belts in a uniform and level stream.

Each feed belt supplies an independently functioning scale suspended over the basic packaging machine on the floor below. Fruit falls off the belt into a down-spout and out onto a combination feed trough and shaker. From the mechanically vibrated shaker, just wide enough to admit the pieces single file, the fruit falls piece by piece into a scale.

When the scale "makes" its weight, a photo-electric cell automatically halts product flow all the way back to the feed belt. At the same time, a solenoid-operated steel finger snaps down to close off the discharge end of the shaker trough. This prevents any additional fruit from falling into the scale before it dumps its current load. Lengths of fall between the feed belt and the shaker trough and between the trough and the scale deliberately have been kept short, to reduce likelihood of any extra fruit falling at the split second when the scale makes its weight.

Four such scale arrangements are suspended over the packaging machines, two to each of its feed heads. Dumping is coordinated to the package-forming cycle of the packaging machine, with one of each head's scales dumping while the others are filling to the desired weight.

Used initially for prunes, these scales have proved effective for other dried fruits as well. Accuracy to with-

in one-half a prune overweight is claimed by their maker. This is considered vastly superior to current manual weighing in the industry with over-under scales. Also, the mechanical scales provide unvarying accuracy unaffected by human fatigue or error—two factors which have forced many packers to hire check-weighers to check on their check-weighers.

Second major reason for the success of this new method is the automatic packaging machine under the scales. Third and latest in the series made by its manufacturer, it also handles the largest package sizes, up to 9½ by 13½ in. Adaption of it to dried fruit began a year ago, when Mayfair officials saw the first unit on display at the National Packaging Exposition and discussed its use with the maker's sales manager.

"What struck me about this machine," says Andy Perucci, Mayfair general manager, "was its approach to the entire bag-forming, filling and sealing problem. Instead of trying to wrestle with individual, hard-to-handle bags, this unit filled the bag as it was formed from continuous roll stock. If we could lick the weighing problem, this would eliminate all our worries about bagging dried fruits, as well as reduce our roll-stock inventories. We decided to gamble on it."

The operation

Printed film is placed on Mayfair's machine in rolls, one to each feed head. Guides encircling each of the two feed heads form this flat film into a tube, while photo-electric cells register it in proper cut-off position. When the machine is placed in operation, a vertical heat-seal bar seals the edges of the film as it passes in tubular form down over the feed head. All heat-seal actions in this installation are of the resistance type. With each filling cycle, horizontal jaws grasp the bottom of the tube and pull it down exactly the length of one package. Within these jaws are two horizontally placed heat-sealing bars. Between the bars is a thin bare wire of high electrical resistance. When the jaws reach the limit of their downward course, the heat-seal bars close in to seal the top of the package that has just been filled and the bottom of the package that has just been formed above it. In almost the same instant the thin, electrically heated wire slices through the film between the two packages.

When the jaws release their hold, the bottom package slides freely down to a conveyor which removes it and its twin from the other feed head to the casing point. Meanwhile the jaws move up again, each feed head chutes its preweighed load into the newly formed packages and the cycle continues.

A special device feeds a fumigant gas into each package as it is filled, to retard the growth of mold.

For the first time on a machine of this type, hydraulic actions are used for all but one of the motions of sealing, register and cut-off. This cuts down the weight of the machine and is said to give quicker, quieter action.

Four other leading dried-fruit packers, according to the manufacturer's representatives, already have ordered similar units. The same basic machine also may be used to package larger-sized candies, cookies, crackers, potato chips and marshmallows. Besides the automatic scale feed already described, it may be fitted with a volumetric turret plate for free solids, an auger feed for powders and a pump feed for liquids. Attachments are available to enable it to handle all types of heat-sealing films, including saran, and to produce fin-seal as well as pillow-type packages.

In addition to its other virtues, this new method also produces what Homer C. Hamlin, Mayfair sales manager, terms "a visibly better visible pack." Sealed closer to the product than the previous gusset-sided bags could be, the flat pillow package appears more fully filled. Product settling on the shelf also is held to a minimum, with none of the bellling out that had been characteristic of the old package.

But most visible of all in this "visible victory" is the fact that for the first time in the dried-fruit business, the finished cost of a flexible transparent package has fallen below that of the industry's standard carton. Such economies, plus increased sales, lead Mayfair officials to believe that mechanization will pay for itself in a relatively short time.

CREDITS: Automatic packaging machine (Model C Transwrap), Transparent Wrap Machine Corp., Route 17 & Henry St., Hasbrouck Heights, N. J. Special net-weight scales, Eagle Machinery Co., Ltd., 465 California St., San Francisco 4. Printed roll-stock film, Milprint, Inc., 4200 N. Holton St., Milwaukee, and Shellmar Products Corp., Mt. Vernon, Ohio, both using Goodyear Pliofilm. Shipping cases, Fibreboard Products, Inc., 1789 Montgomery St., San Francisco 6.

THE OLD WAY



HAND FILLING and weighing in prefabricated bags have produced a sales success, but were a production headache. The old line required 14 workers (not counting the bag-making personnel) to turn out four-fifths as many packages as the new machine and only a single operator.



Vacuumized dills

H. J. Heinz Co.'s new flexible packaging development brings genuine pickles in brine back to the grocery store



POUCH PACKAGE is laminated combination of cellophane and polyethylene with four-color printing on reverse side of cellophane sandwiched between two films. It holds a 28-in. vacuum which is pulled when final top seal is made.

No dill pickles taste so good as the genuine dills in brine that used to be dipped out of the old pickle barrel. But in the modern food store, there is little place for the barrel.

Today's merchandising demands a package. There's no time for the retailer to dip out the pickles and pack them for each individual shopper. And he doesn't like to chance the loss from waste due to spoilage from fermentation before the entire contents of the barrel are sold.

Now, through a striking new application of a transparent, liquid-holding, flexible vacuum package, genuine dill pickles, brine and all, are back in the nation's grocery stores. In neat, vacuum-packed, laminated pouches of cellophane and polyethylene, today's shopper can now buy one or two genuine dill pickles packed in the original brine with the assurance that they will have the same piquant flavor that her grandmother got when she bought bulk pickles out of the barrel.

The pioneer in this development is the famous pioneer in the pickle field, the H. J. Heinz Co., and the vacuum-packed genuine dills are not to be confused with the now popular processed pickles in transparent, liquid-holding but non-vacuumized packages,* also a development of H. J. Heinz as early as 1939. Heinz received an award in MODERN PACKAGING's All-America Package Competition of 1939 for the development of one of the first liquid-holding packages for pickles.

Heinz Genuine Dill Pickles are now being distributed in the new vacuum packages after more than six years of research to find a convenient package unit that would offer the

* See "Liquids in Film," MODERN PACKAGING, March, 1952, p. 196.

FLAVOR is preserved by new package which permits packing with original brine from wooden barrels in which pickles are cured. Convenient units of one or two pickles are offered. Consumer merely snips off seal with scissors.

MODERN PACKAGING

protective properties required for packaging genuine dills in their original brine. It was a terrific job of research, even for this research-minded company.

Earlier experience with the flexible film packages for processed pickles indicated that a similar type of package would be desirable for genuine dills to meet today's merchandising requirements: (1) product visibility, (2) mass display, (3) easy handling, (4) a convenient small unit, (5) sturdiness and lightness of weight for shipping and (6) economical cost.

Glass containers were eliminated because of the cloudy appearance of the brine due to settling. This effect does not show up in a flexible film package. The ordinary type of liquid-holding, flexible-film container was not acceptable, however, because it did not preserve the contents. The only method found for preserving the product in a flexible package was to hold it in a vacuum. For six years Heinz worked both independently and in cooperation with various suppliers, testing numerous film combinations, many of which had to be eliminated because of their inability to hold a vacuum or because they did not have heat-sealing properties. A pioneer supplier of flexible vacuum packages of the type now used for cheese and luncheon meats eventually got together with Heinz on the chance that its packaging methods might be adaptable to the Heinz problem.

After exhaustive studies, a trial run of what was believed an effective package was made last May. The packages were subjected to the most rigid tests to meet Heinz' rigid standards for quality. They were subjected to endless drop tests from the tailboard of a truck to prove that they were virtually unbreakable. In fact, it was discovered that the vacuum, by eliminating pressure inside the pouch, actually "cushioned" the package against shock. The packages were market tested for retailer and consumer reaction. They were tested for leakage. When the company was satisfied that it had a package that was marketable, packaging operations were installed in three of the company's plants: Holland, Mich.; Muscatine, Iowa, and Berkeley, Calif. National distribution was accomplished early this year.

The package is a pouch-type laminated combination of cellophane out-

side and polyethylene film inside, prefabricated with a heat seal on three sides, with the final seal made across the top after filling and vacuumizing. Reverse printing on the cellophane is sandwiched between the two films. This pouch meets the essential requirements for the package. It permits the pulling of a 28-in. vacuum so that all air is extracted except what is integral to product and brine. The polyethylene provides a liquid-holding film resistant to acidity, with good heat-sealing properties and completely taste-free. The moisture-proof cellophane is an efficient gas and vapor barrier and adds body to the polyethylene for easier machine handling. The special combination also permits the making of fine flat seams.

Special packaging lines have been set up in the company's three plants where dill pickles are packed. The pouches are hand opened and placed on the mandrels of a specially developed, rotary-type filler which feeds the pickles from an overhead hopper, either one or two at a time, depending on whether the single-pickle or two-pickle pouches are being filled. By conveyor the filled pouches pass a liquid filler where the original brine from the wooden casks in which the pickles were cured is added. The packages move on to the vacuumizing and sealing machine, where the final seam is made simultaneously with the pulling of the vacuum. The completed packages slide down a trough chute to a water bath to wash off excess brine and through an air-drying tunnel before reaching the shipping line for placement in a specially designed corrugated shipping container.

Of interest to grocers is the fact

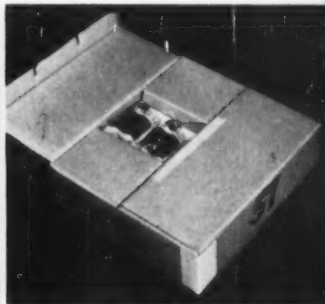
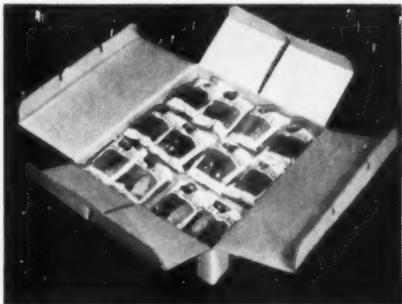
that a special shipping carton has been developed by Heinz for the Genuine Dill Pickles in their flexible vacuum package. The cartons are of cell construction provided by the design and die cutting of the flaps. These cells help to cradle the bags in shipment and guard against breakage or crushing of the product.

By being shipped in this manner, the dills present an attractive appearance when displayed and shoppers may quickly see what they are buying through the transparent packages. Heinz is promoting the new Genuine Dills widely through its sales forces and food retailers have been quick in their acceptance of packaged natural dills.

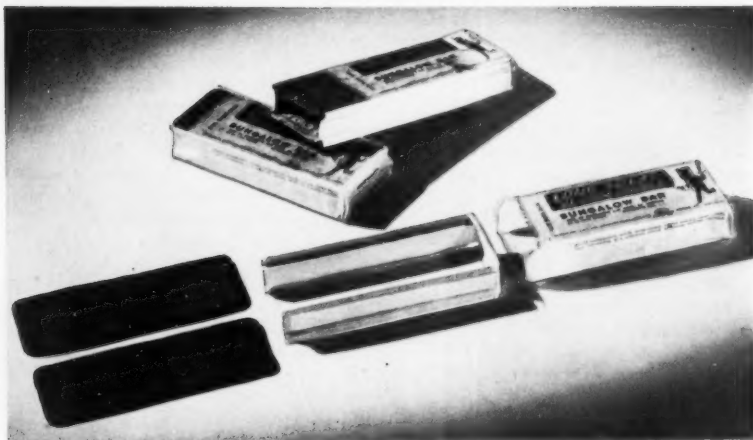
Only the face of the package is printed. The entire back panel is left clear for consumer examination of the product. The new Heinz keystone trademark device appears on the face in green against a divided yellow and white background with accenting and outline rules in red. The product name, Genuine Dill Pickles, appears above a clear area left on the face of the package for the pickles to show through. The package fits snugly around the shape of the pickle due to the drawing of the vacuum.

Nowhere on the package is there a mention that the package is vacuum packed. Apparently Heinz does not consider this is of interest to the consumer. Her interest, the company feels, will be in the quality of the product. If she likes it, she will come back for more.

The use of this type of package eventually will not be exclusive to Heinz. Other pickle packagers are already interested, but due to the large



CELL CONSTRUCTION of corrugated shipping container cradles the bags to guard against breakage or crushing of the product from factory to retail outlet. Photographs show how the carton flaps form the interior divisions.



EXPLODED VIEW in foreground shows the component parts of ice cream sandwich package: two wafers, U-shaped crimped insert that positions the wafers ready for filling and the printed, open-end glassine bag. The assembled open package in background shows how the wafers are held apart by the U-board. For ease of handling, the bag is shorter than the sandwich.

Packaged before it's filled

Ingenious arrangement provides ice cream manufacturer with a pre-packaged wafer sandwich—lacking only the filling

The lowly 5-cent piece—scorned by streetcars, busses and telephone companies and viewed with alarm by a goodly portion of the candy trade—seems likely to get a new lease on life as the result of an ice cream sandwich packaging technique. The nickel retail price for a sandwich containing $\frac{1}{2}$ oz. of ice cream is said to be a practical, profitable product for ice cream manufacturers who use the individually pre-wrapped, pre-packed sandwich wafers supplied by Le Roy Foods, Inc., of Brooklyn.

Specialized packaging techniques and machinery originated by Le Roy are responsible. The ice cream manufacturers' costs are cut because all handling and packaging are done at the bakery on automatic machinery, before the ice cream is added.

At Le Roy, wafers in pairs—held apart by an ingenious crimped-paper-board divider—are filled automatically into individual, printed glassine bags and packed with their open ends up into folding cartons which hold two dozen. All the ice cream manufacturer has to do is open the cartons, squirt his ice cream mix into the space between the wafers and hurry the boxes along to the hardening room. When the consumer gets the open-end package he merely slides out the sandwich, discarding envelope and divider.

The same 2-doz.-size cartons into which the wafers and bags are filled at the bakery and delivered to the ice cream plant serve as containers for final delivery to retailers.

Le Roy's sandwich pack is reported

to have been used successfully by ice cream manufacturers in various parts of the country. National Dairy Products Corp., New York; The Borden Co., New York; Pet Milk Co. and Foremost Dairies, Inc., are among the ice cream manufacturing and marketing companies which have adopted the Le Roy pre-packaged sandwich set-ups. Now, by reducing the size of the standard 10-cent sandwich to half and by further streamlining the filling process for the ice cream people, the company believes it has made a 5-cent sandwich a practical proposition.

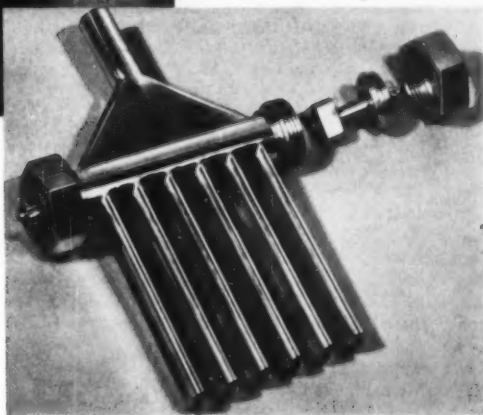
Production of the set-ups

Le Roy produces its sandwich wafers on two complete 350-ft. band ovens which maintain continuous production for the product.



FILLING at Meadow Gold Ice Cream Co. plant is simplicity itself. Sandwich set-ups arrive packed open end up, 24 to a carton. Carton flaps are folded back, stainless steel mask placed over and sandwiches filled right in the package through portable nozzle. Girl at left places parchment sheet over filled ends, reseals carton—and off it goes.

NEWEST NOZZLE fills six sandwiches at a time, has so lowered the costs as to bring back the nickel ice cream sandwich. With it, a three-girl team can produce 900 dozen sandwiches per hour.



Mixing, rolling, die cutting, baking and cooling of the wafers are all handled on continuous automatic equipment. Adjustment must be precise all along the line because the composition and moisture content of the baked wafers must produce the exact "snappability" and crush resistance desired. The dough is a special formula developed for ice cream sandwich service—the soak-up of moisture during filling with ice cream and under prolonged refrigerated storage is expected and taken into careful consideration.

Wafers enter the packaging room on a broad belt and are manually stacked into piles by workers who inspect them for uniformity and texture before loading them into the Y-shaped twin magazines of a battery of automatic packaging machines for which Le Roy owns the patents. The stacking-inspection operation is the only manual phase of the process. Accurate production control and alert inspection are vital because off-size or improperly textured wafers will either burst the individual glassine bags or be crushed during insertion.

Le Roy's packaging machines, which insert the two wafers in each glassine bag, automatically space them by inserting the crimped paperboard spacer at the same time. The insert is automatically cut off from a continuous strip of the paperboard tag

stock; it is formed into "U" shape and the edges of the two arms of the U are crimped so that they catch the edges of the two wafers and hold them apart in the bag. The insert and the wafers are of course placed in the glassine bag so that the open end of the "U" is upward. An accompanying photograph shows the component parts of this set-up in exploded view.

The insert retains the soft ice cream mix between the wafers during filling at the ice cream plant, molding the cream neatly, and lends the filled, frozen sandwiches some extra strength to resist compression. The latter is particularly important when the sandwiches are stacked in the columns of refrigerated, coin-operated vending machines.

The accurately maintained spacing—which incidentally also requires accurately sized bags—assures the ice

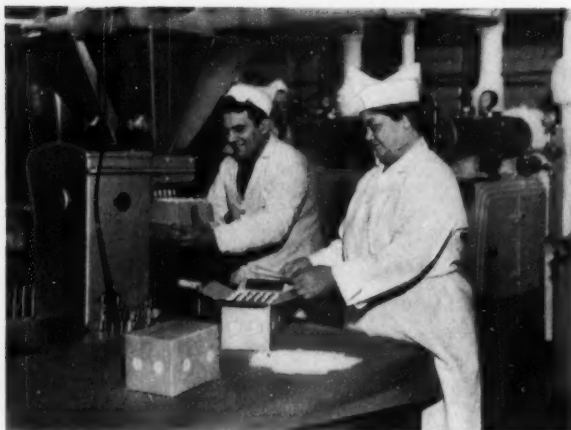
cream manufacturer of accurate fill. All he has to do is fill the space between the wafers flush to the top and if his freezer overrun has been properly adjusted, the weight of ice cream in each sandwich is automatically correct.

In the Le Roy plant, the sandwiches are automatically cartoned and loaded into automatically glued and sealed corrugated shipping containers, each holding 24 of the 2-doz. "Long Treat" cartons or 48 of the 2-doz. "Nickel Treat" cartons.

At the ice cream plant

The typical ice cream manufacturer receives his pre-packaged sandwich set-ups from Le Roy warehouses in these same 48-doz. shipping containers.

These are moved to the work tables set up near the continuous freezers



ANOTHER METHOD of filling, used by smaller plants, is to rig multiple nozzle on a stationary hopper-fed batch filler. Note holes in sides of carton to permit escape of air as bags are filled.

and turned over to three-girl crews. The first member of the crew opens the shipper to remove the basic 2-doz.-size cartons of bagged set-ups. These she opens at the bottom, thus exposing the open ends of the sandwich bags. After folding back the carton flaps, she places over each open carton a special stainless steel plate or mask. The mask has 24 rectangular holes corresponding exactly to the open spaces between the wafers in

the individual ice cream sandwich packages.

The second girl in the crew wields a clear plastic hose ending in a special multiple nozzle. The hose, connected to a continuous freezer, feeds partially frozen ice cream. The hose operator passes the nozzle across the perforated steel plate to squirt ice cream through the guide holes into the sandwich bags.

Until the advent of the nickel-size

WAFFER BAKING and assembly with dividers in glassine bags is a continuous high-speed process, using patented machinery. Note the Y-shaped wafer magazines, to feed two wafers at a time.



sandwich, Le Roy supplied a double nozzle which filled two sandwiches simultaneously each time the nozzle was inserted into the package. To assure the efficiency needed to make the nickel sandwich a realistic proposition, the company has now developed a six-way nozzle which gives six equal flow jets of the mix simultaneously. Four "squirts" with this nozzle fill one of the cartons of sandwiches.

Skilled operators, it is said, learn to move the nozzle from one row of holes to another so quickly that they do not have to cut the flow at all while filling a carton. With a six-way nozzle, such an operator can fill at speeds approximating 180 sandwiches a minute.

As fast as the 2-doz.-size cartons are filled, the third member of the crew removes the steel masking plate, places a piece of cut-to-size vegetable parchment over the filled sandwiches and closes the carton. (Instructions printed on the carton direct the retailer to open it on the other side, where ice cream is protected by the sealed ends of the bags.)

The filled cartons are usually placed on a continuous conveyor for immediate removal of the cartoned product to a hardening room.

Three girls can produce a minimum of 600 doz. filled 3½-oz. (10-cent) sandwiches per hour, according to Le Roy, or 900 doz. per hour of the ½-oz. nickel sandwiches.

The cost of the ice cream plant operator of the set-up sandwiches is said to be about the same as, or slightly higher than wafers, printed bags and cartons purchased separately.

It is the efficiency that is attained in the actual filling operation and the saving of labor in assembling and packaging the sandwiches which makes the system such an attractive method of operation for the ice cream manufacturer.

CREDITS: Printed glassine bags, Custom Made Bag Co., 33-02 Skillman Ave., Long Island City, N. Y. Waxed insert board, Schrafel Paper Co., 320 Broadway, New York 7; and New York & Brooklyn Paper Co., 245 Lafayette Ave., New York. Folding cartons, Shuttleworth Carton Co., 474 W. Broadway, New York. Glassine paper and parchment sheets, Riegel Paper Co., 260 Madison Ave., New York. Shipping containers, Hankins Container Corp., 601 Lehigh Ave., Union, N. J.

General Mills' quick-opening shipping case
brings new convenience to the retailer

TEAR-TAPE SHIPPER

Another packaging "first" is currently being chalked up by General Mills, Inc., Minneapolis, with its new tear-tape shipping container for Betty Crocker Pie Crust Mix.

The container, first of its kind, and first to be introduced to the nation's food industry, is designed to overcome the need for special opening tools at the retail level. In fact, it can be opened almost as easily as a pack of cigarettes or chewing gum.

To open it takes a couple of seconds. Opening is accomplished merely by pulling a tab of pressure-sensitive filament tape. Pull the tab and the container's top "pops right off." A hidden zipper of tape, visible only where the tab extends from under the manufacturer's joint, does the job by cutting cleanly through the container's heavy sides.

Adoption of the easy-opening technique, known as the "tear-strip" method, was made by General Mills in December and put to immediate use on a major portion of the total pack-out of Pie Crust Mix containers for a special mid-winter deal promotion, even though a run of standard containers was already under way. General Mills' use of the method at this time was prompted by the "plus" display advantages of the tear-tape shipper.

To accomplish this change-over, the firm's box supplier installed the first fully automatic stripping machine in its plant—a machine that automatically applies the "tear strips" of filament tape to the inner liner of container blanks prior to taping the manufacturer's joint.

Also, to facilitate a retailer's use of the new container, two-step opening instructions were lithographed on the outer liner of the 15 $\frac{1}{2}$ -in.-by-48-in. blank stock of B-flute corrugated board.

Imprinted across the top flap is the warning, "Stop! Don't Cut This Case,"



TIME-SAVING pull on the tear tape opens this shipping carton in a matter of seconds. Tape is a strip of strong filament applied on the inside of carton. No scoring, die cutting or perforations are employed. Hand-opening or mechanical methods and risk of damage to contents are eliminated.

plus the message in reverse over a large blue arrow, "Use New Easy-Opener—Follow Instructions on End of Case." The instructions read: "(1) Pull white tape to left edge of case. (2) Pull white tape to the right completely around case." In addition, a line of arrows, broken at intervals with the message "pull completely around case" runs about 1 in. above the bottom score line to indicate the tear line.

In mid-December, the first pre-trimmed, scored and printed blanks began feeding off the stripping machine at better than 60 blanks a min-

ute. During this split-second operation the individual blanks are (1) automatically fed into the machine and conveyed to the taping mechanism, (2) stripped with the $\frac{3}{8}$ -in.-wide "tear-strip" tape and (3) ejected onto a take-off table.

As each blank enters the taping mechanism it automatically energizes an applying device which starts feeding the tape from a level-wound 4,000-yd. roll. Instantly a 4-in. tear-strip tab is folded under the blank's leading edge and a 48-in. strip pressed along the length of its inner liner. The tape strip is severed by a



COMPLETE ACCESSIBILITY to contents is provided by tear-strip method. Severed carton is conveniently divided into a package-holding tray and a flapless top section ready for use at the check-out counter.



COMPELLING DISPLAY of Betty Crocker Pie Crust Mix results from use of tape-opened cartons. Tray section of shipper, printed to announce special offer, helps in selling job. Individual cartons can be removed without toppling other packages.

solenoid-operated knife as the trailing edge of the blank trips a cut-off switch.

Location of the tape, approximately 1 in. above the container's bottom score line, conforms to the tear line printed on the outer liner. Neither side of the liner, however, is scored, perforated, die-cut or otherwise weakened at the "tear" line. Rather, the narrow strip of tape actually reinforces the container at this point.

In adopting the new easy-opening method for its Pie Crust Mix deal containers, General Mills believes it has pioneered "the most revolutionary development in packing, shipping and merchandise unpacking to hit the food industry." To that end, the container—filled with 2 doz. 9-oz. "half-price" packages—is expected to find widespread acceptance in the trade.

Its set-up and filled appearance does not differ from that of other containers, except for the visible tab of tape and the printed warning and opening instructions. When unzipped, however, it becomes the first container purposely designed for double-duty use at the retail level.

First, the top section pops off to provide the retailer with a convenient-size carry-out carton for use at the check-out counter, an undamaged carton that is completely flap free. Second, and probably most important, is the automatic display tray provided by the lower section.

This display tray—the portion of the container remaining below the tear line—is designed to facilitate

handling, price marking and display of the contents. Also, it permits stock clerks to build floor displays simply by zipping the container open, removing the top and lifting the tray and contents in place without first removing the packages from the tray. Such displays are enhanced by the point-of-sale message "½ Price Special" that is carried on all of the four display sides of the tray.

Aside from these features, General Mills' new container is primarily designed to continue delivering the contents to the ultimate consumer in the best possible condition, to end any need for the retailer to use special opening tools on the container and to provide a labor-saving device that will reduce costs.

To cut costs, the container's built-in opener permits opening by stock

Plus convenience



EASIER PRICE MARKING results because contents of the carton are held intact in the tray, with no carton flaps to struggle with.

clerks and display of the contents in seconds rather than minutes, thus overcoming the difficulties of former opening methods and package-by-package display building. In addition, because the carry-out section is flap free, there is no need for tying or taping the flaps at the check-out counter.

Further, because the container is not damaged during opening, stock-room clerks can open it, price mark the contents, replace the top section and stack the containers for immediate use.

It is anticipated that the "tear-strip" method can be suitably adapted to other product containers in General Mills' line, according to R. L. Brang, vice president and director of Grocery Product Sales. "However, because other containers in the line vary in size," Brang explained, "the same apparent advantage found for the Pie Crust Mix container must be measured on an individual-container basis."

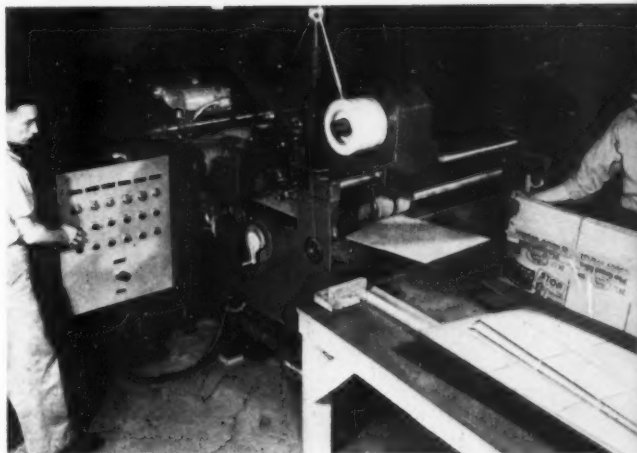
Foreseeable future changes could include relocation of the "tear" line, which can be positioned any place on the depth of the container parallel to the top or bottom score lines of the tray.

Positioning of the tape on large con-

tainers, for example, may be at the center so that the hidden zipper divides the container into two equal-size carry-out cartons.

CREDITS: Easy-opening corrugated containers, Downing Box Co., 3822 N. 3rd, Milwaukee, Wis. "Scotch" brand filament

tape No. 880, "tear-strip" method and automatic stripping machine, Minnesota Mining & Mfg. Co., 900 Fauquier Ave., St. Paul, Minn. Stripping machine made for 3M by the H. G. Weber Co., 102 Fremont St., Kiel, Wis. Pie Crust Mix packages (clay-coated newsback), Waldorf Paper Products Co., 2250 Wabash Ave., St. Paul, Minn.



NEW AUTOMATIC MACHINE for applying tear tape (white roll, top center) to carton blanks is here shown in the supplier's plant. Tape is applied at the rate of more than 60 blanks a minute.

provided for retailers



EASIER HANDLING. Each tray is its own pallet. Floor displays can be built in a few minutes.



EXTRA DUTY is performed by the flapless top section of the carton. Here it is used as an easy-to-pack carry-out container.



FIFTIETH OF A SERIES

MINUTE MAID

CONCENTRATED FROZEN ORANGE JUICE

The American housewife saw her first can of frozen orange juice concentrate in 1946. She bought it, tasted it and decided she liked it. In less than seven years, frozen concentrated citrus juice has become daily breakfast fare for a fifth of the nation. Its annual retail sales volume of \$240,000,000 represents a third of all frozen food sales. It is sold in more than 220,000 stores, representing 85% of grocery business, and the 6-oz. cans provide the biggest single outlet for the country's large citrus fruit crop.

"By the yardstick of consumer purchases, frozen citrus concentrate is one of the most successful packaged foods ever made," reported *Fortune Magazine* in March, 1952.

The unquestioned leader in this

development is the Minute Maid Corp. Minute Maid was the first brand of frozen concentrated juice to be marketed. It has consistently maintained leadership in sales and latest independent market surveys show that Minute Maid's share of the retail market now approaches 20% of the total volume among more than 90 competing brands.

Minute Maid was first to adopt the now generally accepted 6-oz. metal can which has become the standard packaging form for the frozen juice industry and thereby opened up an entirely new use for metal packages which today totals nearly a billion of these containers per year. And more than any other, Minute Maid's pioneering of metal packaging has helped to win continually widening

acceptance for the packaging of frozen foods in metal containers.

Minute Maid was also one of the first in its field to recognize the need for distinctive, instantly recognizable package design and family identity for its complete line of fruit juices. As early as 1948—just two years after marketing the first juice in consumer-sized cans—Minute Maid employed an industrial design firm to develop the mass orange motif label and logotype which have become so familiar to shoppers all over the country and which have been such a significant tool in helping Minute Maid to maintain brand superiority.

Experiments in citrus juice concentrates had gone on for about 20 years prior to the '40s, but success came with the discovery that flavor could be preserved by the use of a high-vacuum process which evaporates the water from the fresh juice at only 55 deg. F.—a temperature so low that it affects neither taste nor vitamin content. The process was developed early in the '40s by a group of young men, most of whom were identified with the Massachusetts Institute of Technology through their work in designing machinery for National Research Corp. in Boston to quick-dry penicillin at low temperatures.

The group first found it could reduce orange juice to a powder and a contract was given by the Army for 500,000 lbs. Known as Vacuum Foods Corp. (now the Minute Maid Corp.), a company was formed and capital raised to build a plant for producing the powder. Frozen orange juice concentrate came a little later through the discovery that a concentrate manufactured as an intermediate stage of the powder making could just as well be frozen—and when reconstituted lost none of the flavor of the fresh

FOUNDER FOX, Minute Maid's young president, shown with some of the 90 competitors over which his brand has consistently maintained leadership.



NOMINATED FOR PACKAGING'S HALL OF FAME BECAUSE:

- In less than seven years it has pioneered the development of one of the most successful packaged foods in history.
- It has opened up a market for metal packaging of frozen foods of nearly a billion containers a year.
- It has proved convincingly the value of strikingly distinctive package design in establishing and maintaining brand superiority.
- It continues to hold a position of unquestioned leadership amidst the stiffest kind of competition.

juice nor any of the nutritional elements such as vitamin C.

The time for introducing the product seemed right in 1946. The post-war growth of frozen foods was well under way and many stores had frozen food cabinets. Florida citrus growers, who had doubled production during the war, needed new markets for their expanded crops.

The packaging

One of the first problems was how to package. There was no precedent. The product, of course, could be canned. In fact all frozen food packers knew from the start that a can was one of the most efficient protective containers for frozen foods, but practically all had by-passed it in the beginning and engaged in no end of research to develop paper and film packages for frozen foods to prevent confusion with traditional types of canned foods. It was thought that consumers would be more apt to store frozen foods under refrigerated conditions if the package distinguished them from other types of processed foods.*

At first, Minute Maid believed it too should use a differentiating type of package and undertook extensive study in various carton types of packaging. None of these, however, proved to be completely satisfactory for a juice type of product. Eventually the pioneers went back to their original idea of using a metal can, but they still had to determine the size. What quantity would the consumer want when the frozen juice was reconstituted? And what can was there on the market small enough for what was thought to be the preferred quantity. The 6-oz. quantity to which



MASS ORANGE illustrative device has given Minute Maid packages distinctive character in frozen food cabinets. Minute Maid was first to adopt the 6-oz. can which has become standard in the frozen juice concentrate industry. The company markets concentrate in four sizes.

ILLUMINATED point-of-sale displays of package and delicious drinks that can be made from product have been important aid in promotions.



* See "Buck Eye Frosted Foods," MODERN PACKAGING, July, 1951, p. 76.



EARLY PACKAGES gave brand identity, but made no attempt to attract consumer with colorful pictorial treatment. First Minute Maid product was an orange powder. The 1950 package, the present one, was the result of study which avoided all design treatments used by competitors.

the user added three parts water to make a pint and a half of orange juice was finally accepted as the selling unit.

Can companies had already developed a 6-oz. container for individual servings of unfrozen canned fruit juices. The fact that this size of container was available and provided for a quantity of the frozen concentrate, when reconstituted, to serve the average family needs undoubtedly influenced its original selection. And its efficiency and convenience have since won its universal acceptance as the standard juice concentrate container by the industry.

Consumer education was necessary to tell the housewife how to prepare the new product, which was done by describing the three-step procedure on the label: 1. Pour contents into pitcher. 2. Add three more cans cold water. 3. Stir or shake briskly to mix. Minute Maid says this was not so difficult to put across in the beginning because consumers were familiar with adding water to canned soups and the orange juice procedure was very much the same idea.

Early cans of the concentrate carried traditional wrap-around paper labels as used generally by other canners, but the need for full-color litho-

graphed cans soon became apparent to withstand the moisture conditions of the product under refrigeration. Paper labels had a tendency to come off, thereby losing brand and product identity. Furthermore, the use of the lithographed cans, in the quantities required for the frozen orange juice concentrate, proved to be a decided production economy as it is in many cases when there is large volume on one product. Minute Maid is able to use the same lithographed can for its entire pack of orange juice in 6-oz. units and thereby eliminate entirely an applied-labeling operation.

The tinplate shortage brought about further improvement in the package through the use of an electrolytic can which saves large amounts of tin, is a better container, according to Minute Maid engineers, and is considerably less expensive. The development of a special inside enamel coating to resist the citric acid in the product has also greatly increased the efficiency of the present container.

The citrus juice concentrate is packaged before freezing. The can filling and sealing operation is similar to standard procedure although much development work has been necessary to achieve the high-speed closing equipment used today. Holman R. Cloud, vice president of operations, who has directed Minute Maid operation since the beginning, has seen production increased from 17 cans per minute in the first Florida plant to up to 400 per minute on the high-speed lines in the company's four modern plants today.

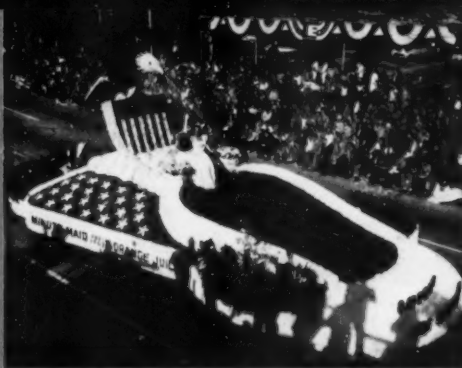
Following the filling and sealing operation the cans of juice pass through freezing tunnels from 10 min. to 2 hrs., depending on requirements. From there they are conveyed to case loaders and are packed in corrugated shipping containers. The citrus juice concentrates are packed 48 to the case and the blends and lemonades are packed 24 to the case. The filled cases move by conveyor to refrigerated warehouses where they are palletized ready for shipment under refrigeration to all parts of the country.

The bulk of the pack is in the 6-oz. containers, but in addition the company packs the frozen juice concentrate in 12-oz.-economy-size and in 32-oz.-institutional-size cans. Minute Maid has also been packing a small quantity of 4-oz. cans to meet the re-

BING CROSBY bought Minute Maid stock in 1948 and his consistent radio plugs have been important factor in building Minute Maid's \$30,000,000 annual sales volume. Bing is shown here with (left to right) Adman James Rayen, Sales Manager Howard Boerner and Vice President Ambrose E. Stevens.



*Promotional
showmanship
keeps Minute Maid
out front*



FLARE FOR THE DRAMATIC puts Minute Maid in the public eye. Minute Maid floats have been three-time winners in the Pasadena New Year's Tournament of Roses parade. Elaborate displays of flowers, the floats have been made of as many as 125,000 blossoms.



LEMONADE STAND kits as premiums, promoted on Gabby Hayes' summer show, kept interest high in Minute Maid Lemonade among younger set.



JUICE MIXERS used as premiums and special promotions provide consumer convenience, continually put over the frozen juice concentrate story to consumers. At left is 2-qt. glass mixer with lithographed metal closure. The polyethylene plastic mixer illustrated at right has a pour-out opening in its closure and has a 1-qt. capacity.



MULTIPLE SALES are encouraged by special offers of four 6-oz. cans of juice in a polyethylene bag.

quirements of small families and apartment dwellers. Minute Maid is watching closely developments in flexible packs for individual servings of frozen juice and has done considerable experimental work along this line.†

Origin of name

The successful brand name, Minute Maid, came about almost by accident. John M. Fox, Minute Maid's young president and founder, during the first year was planning to call on a prospect in Baltimore. The morning he was about keep the appointment he realized he had no name for the orange juice powder Vacuum Foods was then trying to market. Frantically he called the advertising agency in Boston he was then employing, asking what to call it. From the town historically famous for Minute Men,

came the suggestion "Minute Maid." While this name has the advantage of conveying the idea of quick preparation, he didn't think much of it, but for lack of anything better at the moment, he used it in Baltimore. Surprisingly it caught on and it stuck. It was registered in 1946 and the name of the company was changed to the Minute Maid Corp. in 1949.

In the beginning the going was tough. Minute Maid raised money in the stock market to build a trim new plant at Plymouth, Fla., and it had to pay its way somehow while it developed its orange juice powder. Fox approached a bustling new outfit called Snow Crop Marketeers, Inc., and asked if they would like him to pack some concentrate for marketing under the Snow Crop label. They agreed, but nobody sold much frozen orange juice during the 1946-47 season. The product was too new and not enough shoppers were aware of

its convenience and delicious flavor. Snow Crop eventually sold out to Clinton Industries, Inc. The frozen juice did not move and besides being faced with a loss of \$371,000 on sales of \$453,000, Fox had more than \$550,000 tied up in an inventory of Snow Crop juice. He was sure, however, that if he could hold on, his company would succeed. His solution was to take over the Snow Crop cans and try to sell them under the Minute Maid label. About the same time he abandoned the idea of making orange juice powder and put all his efforts in getting people to try the new juice concentrate.

He loaded his car with the concentrate and went from door to door in Hingham, Mass., giving a can of juice to each housewife and begged her to try it. Local grocers were immediately swamped with orders. By 1948 the frozen citrus concentrate really started to roll. Good press publicity

† See "Orange Juice in a Bag," MODERN PACKAGING, Sept., 1952, p. 110.



WHOLE FAMILY includes six juice concentrates and lemonade, orangeade and limeade. Mass fruit illustration and broad white band carrying brand and product information have become the package signature. Only departure from this treatment is the use of appeal to children's market on the ade cans with lemonade-stand and circus interest.

and continued word-of-mouth advertising helped to build up acceptance.

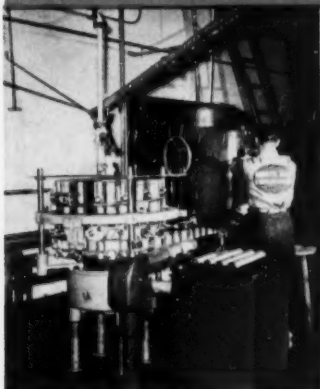
Fox allocated \$150,000 for advertising and promotion and hired Ambrose E. Stevens, a former vice president of Birds Eye, as vice president in charge of Minute Maid sales. He put another \$150,000 into advertising. This campaign and aggressive sales activity moved the inventory and established Minute Maid as a brand name for the product.

The same year John Hay (Jock) Whitney, in search of new products to finance, acquired stock in the company. With this new financing a staff of merchandising experts was hired, demonstrators were put in stores and a vast sampling campaign was conducted by mailing hundreds of thousands of coupons good for a can of Minute Maid when redeemed at the grocery store. Sales were zooming by July, 1948. By August it was neces-

sary to ration the product to dealers.

Whitney played golf one day with Bing Crosby and gave him a sample drink of the reconstituted orange juice. Bing bought 20,000 shares of stock at 10 cents a share and started plugging Minute Maid daily on the radio. Through all this effort, sales reached \$3,000,000 in 1948—six times the 1947 total. And they have continued to climb ever since. Minute Maid reached national distribution in

Sequence of high-speed



BEFORE FREEZING, cans are filled and sealed at speeds up to 400 per minute in Minute Maid's four modern plants.



BLAST FREEZE CHAMBER where the filled cans are quickly lowered to 40 deg. F. below zero.



48 CANS are rushed into cases while still at sub-zero temperatures. Cases then move by conveyor belt to super-cold storage.

1950. Sales of \$30,445,000 for the fiscal year ended Oct. 31, 1952—a 10-fold increase in four years—were reported to be the largest in the company's seven-year history with a net profit of \$1,201,000 or \$1.23 a common share in an industry in which scarcely anybody up to last year had made any money.

Minute Maid's success is in no small part due to the company's large and persistent advertising effort under the direction of James Rayen. The budget for 1953 will be about \$1,800,000 with continued help by Bing Crosby in spot radio, Kate Smith on TV and wide use of four-color magazine advertisements, space in Sunday newspaper supplements, local newspapers and billboards. All of this is aided by the use of the illuminated merchandising displays above the refrigerated cabinets at the point of sale featuring the package and the delicious fruit drinks that may be made from its contents, the use of the Minute Maid trade character, continuous publicity in newspapers and magazines, plus promotional participation in various public events. Minute Maid's float has three times been a winner in the Pasadena New Year's Tournament of Roses parade. The company has also used effectively premium promotion of Minute Maid mixer bottles for storing reconstituted juice—a clever aid in educating consumers in the use of the product.

Under Mr. Stevens, vice president in charge of sales, and sales manager,

Howard Boerner, Minute Maid has assembled one of the most aggressive young sales organizations in the food business. Selling is done through exclusive distributors in the frozen food field and through seven divisional sales offices.

Behind this sharp-edged promotional attack to win new markets is one of the most striking case histories of effective package design. As Minute Maid moved into the big time, so likewise did some of its numerous competitors. By 1949 nearly 50 different brands of frozen concentrate were already confusing the shopper. Minute Maid, the pioneer and sales leader, found itself surrounded by new labels that threatened to send shoppers to new brands.

With his typical sagacity, Jack Fox, founder and president, realized that the Minute Maid packages needed a "new look" if they were to continue wooing the millions of potential customers who were just discovering the convenience and flavorsome taste of the frozen orange juice concentrate as well as the other frozen concentrates which the company was gradually including in the Minute Maid line: grapefruit juice, grapefruit and orange juice blend, grape juice, tangerine juice, pineapple juice and frozen concentrate orange, lemon and lime ades.

The missing link which was literally making a monkey out of the best efforts was a strongly identified package family that would stand out

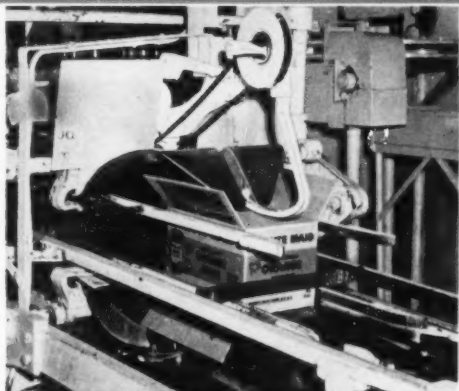
distinctively among the increasing number of competitors and that the consumer would recognize and remember wherever she saw it.

A firm of industrial designers was called in to develop an integrated identity program from "grove to gullet." The designers outlined a few simple precepts that began with the package. The Minute Maid cans which up to that time had been primarily lettering jobs in blue, yellow and white with ineffective illustrative treatment would have to be given sharp contrast to set them apart from the late-comers that were crowding into frozen food cabinets.

The first step was an examination of all competitive-brand packages for color, typography, illustration, copy and general character. General trends were noted and the success or failure of each package design was recorded along with other known facts about the competitive brands' merchandising practices. From this point Minute Maid avoided any similarity to existing brands. This was comparatively simple to do, since it was discovered that existing labels tended to fall into a pattern.

Minute Maid could blaze a new design trail. Instead of a single orange or part of an orange which most competitors were using as the decorative device, the designer of the Minute Maid can selected a mass of fruit as the attention-getting motif—offering appetite appeal, but departing from (This article continued on page 174)

continuous-line production



AUTOMATIC SEALING takes place while cases move along the line to sub-zero storage. Glue for cases is specially compounded to hold at low temperatures.



FILLED CASES of Minute Maid concentrated orange juice are palletized in zero storage warehouse, where they are kept ready for shipment to all parts of the country.

Precision labeling

A new machine helps Sofskin solve the problem of mass production and sales with a quality cosmetic look

The demands made of a package for a popular-priced cosmetic or toiletry pose conflicting problems: the package must look demure in the customer's boudoir and at the same time be able to stand up on its hind legs and fight for attention on the self-service counter.

It would be a tough enough art and production job to create such a versatile package in a single size-price category, but very often the same package must be identically reproduced in a gamut of sizes ranging from a dollar size to a 10-cent variety-store model. Here the choice of packaging materials and equipment requires careful planning if all sizes are to pull their respective weights in the company's profit picture.

The development of the new package for Sofskin Hand Cream introduced last summer by Vick Chemical Co.'s subsidiary, The Sofskin Co., Bloomfield, N.J., neatly illustrates an approach to such problems. The solution involves one of the first U. S. installations of a labeling machine of

British origin which has attracted considerable attention among manufacturers over here.

The initial package design for Sofskin was a squat jar covered with a fired-on ceramic black, relieved by a narrow band label of gold-printed paper. This served well for the product, confirming the company's choice of color and shape. The black and gold, contrasted against the pastel shades predominating at the toiletry counters, made its mark. But for full-scale production, Sofskin sought a stock container which would prove economical even in a 10-cent size, with a label easier to handle and more durable than the narrow ribbon of paper.

The outcome is a stock opal squat jar with a full-covering black and gold foil label, which reproduces closely the rich appearance of the original jars and still promises economy. Double inking of the foil in the plain black area produces the desired intense black, while the addition of about 1½% of wax to the ink adds both gloss and the ability to resist finger-marks and wetting. The foil itself, where left bare, provides a gold surface of eye-catching brilliance that is tough and water resistant to boot. No protective lacquer is required. The foil is combined, of course, with a paper backing for strength, economy and good adhesion.

This label has proved able to stand up even under variety-store conditions, where bottles are often displayed piled on their sides in layers, in shallow bins. This is an effective type of display saleswise, but it has a tendency to grind and roll label against label as customers handle the jars or sales persons replenish and rearrange the pile. To maintain a pres-

THREE SIZES of Sofskin hand cream are presently being labeled (a fourth is to be added) on a British-made automatic machine that offers quick change-over, unusual accuracy and speeds up to 10,200 per hour on a hard-to-handle foil overlap label. Pencil points to clean, well-registered lap line.



tige appearance here, a label must be smooth, tough and well buttoned down at the edges.

Labeler for the job

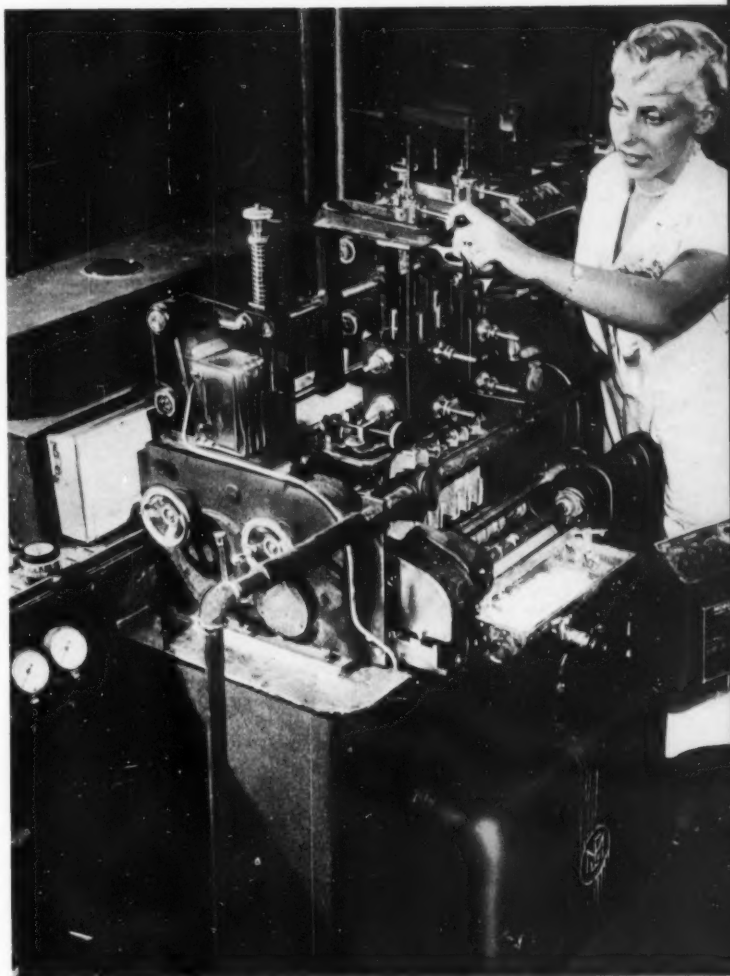
Having determined the size, shape and design of the label and the material for its construction, Sofskin Co. looked for a machine to apply it. The requirements were listed as gentle handling (because foil is occasionally subject to buckling and minute tears at the edges unless treated carefully), perfect vertical register (because the labels were designed to cover the full cylindrical depth of the jars right to the shoulder break to create an all-black container appearance), ability to label a number of sizes down to very small jars, simple and rapid change-over among the four jar sizes, and unit speed high enough to make filling of small jars economical. This list of requirements was circulated among machine suppliers.

The British machine selected offered speed on two counts: labeling speeds from 2,400 to 10,200 containers per hour, infinitely variable, and 15-min. change-over for different jar sizes. Change parts are keyed for automatic self-positioning when inserted, with only one right, simple way to install them. Consequently no adjustments have to be made nor are specially trained employees needed to effect a change-over and immediate start-up on another size.

This labeler's operating sequence is of interest and can best be described by tracing through the career, from stack to jar, of a single label.

Labels are loaded, plain side down, into the label rack. All adjustments for register and label alignment are made with locking knurled-knob controls on the label rack. In the case of the Sofskin operation, four separate, complete label racks are used, with each one set up correctly and locked, for use with one of the four label and jar sizes. The machine will handle labels up to 12 in. long and from 6 in. down to approximately $\frac{1}{2}$ in. deep. The four jar sizes being packed at present are 4 $\frac{1}{2}$, 2 $\frac{1}{2}$, 1 $\frac{1}{2}$ and 0.35 oz.

With the labeler operating, a bottle or jar approaching the labeling station electrically releases the label rack slide, setting in motion the sequence of synchronized motions which supplies a label to that bottle. Thus there is a no-bottle, no-label feature which effectively operates during any temporary interruption in the flow of con-



COMPACT MACHINE operates on unusual revolving turret principle, picking up labels, applying glue and positioning them on bottle or jar in progressive steps. Operator has full visibility of glue pot, rollers, glue turret and delivery turret. Light-colored rectangle visible at left end of machine is a shield over the end roller of the cushioned belt which rolls the jar upright against the glued label.

tainers into the machine without stopping or slowing down the uniform speed of operation of the labeler's mechanism.

The released label rack descends and at the bottom of its travel the bottom label on the stack is placed across one face of a four-sided glue turret. This glue turret is made up of six or eight square metal plates closely spaced along a shaft and looking for all the world like part of an overgrown variable condenser. The edges of the

metal plates form the glue-applying surfaces, depositing glue on the label in a series of narrow, vertical strips. By varying the number of plates and their spacing along the shaft, the amount of area glued can be controlled within narrow margins and placement of glue can be controlled to assure its application at the ends or overlap of the label.

As the label carrier ascends after reaching the bottom of its travel, the bottom label on the stack is held by



CHANGE PARTS, a set for each jar size, are pre-set and automatically align themselves when inserted. Complete set of parts in foreground includes flanged glue turret, glue transfer roller, vacuum tube set-up for label pick-up, label rack, plastic-sided delivery turret and, in the mechanic's hand, worm screw jar feed spacer.

glue tack on the plates of the glue turret.

As the label rack rises, the glue turret makes a 90-deg. turn, then pauses to let the next face of the square glue turret accept the next label. On the next quarter-turn of the glue turret, the first label is ready to be transferred to the delivery turret. This is a square box of the same general proportions as the finned glue turret, but constructed as a hollow, metal-framed plastic box with rubber pads to receive the labels. Slight negative pressure is maintained in the hollow delivery turret and there are a number of small air holes in the rubber pads.

The label is transferred across from the glue turret to the delivery turret by a row of metal transfer fingers which emerge from between the plates of the glue turret behind the label and carry it over to the vacuum delivery turret, where it is held glue side out.

When the delivery turret has made two quarter-turns after receiving a label, the label is at the labeling station—held horizontally at the proper height alongside the jar conveyor. The jar which will receive it is already syn-

chronously spaced by a rotating worm screw alongside the feed conveyor. As the label reaches the labeling station it is caught in the pinch of a parallel-moving, cushioned side belt which forms the other side of a narrow slot through which the jar must travel. The belt moves at the same speed as the conveyor. The pinching action of this moving belt rolls the container around its vertical axis across the label. The rolling jar is squeezed tightly between the cushioned moving belt on one side and the rubber pad of the label delivery turret on the other, so that it is forced to roll across the glued side of the label with sufficient pressure to make the label adhere firmly to the jar.

Because the glue has been placed on the label in a series of narrow, vertical strips and the label is applied to the container under rolling pressure, there is little tendency for glue to be squeezed out along the top or bottom of the label. Rather, it tends to spread horizontally across the label into the areas left unglued, resulting in a virtually all-over-glued label.

When the labeler is at work in continuous motion and the rise and fall of the label rack is being triggered by

an uninterrupted supply of containers, one label is being fed by the label rack onto the gummed turret, another is simultaneously being transferred to the delivery turret and there are already two other labels on the turret, one of them under the rolling pressure of the container, another held in readiness to move into delivery position on the next quarter-turn.

The square-sectioned glue and delivery turrets move in intermittent contra-rotation to each other, both making a 90-deg. turn for each label delivered. This method of label handling is said to result in comparatively low speeds for all parts of the mechanism, with no moving part attaining a speed greater than the number of containers labeled per minute. Labeling speed is adjustable through infinitely variable speed gears.

Glue problem solved

The register accuracy of this labeler was especially appreciated by Sofskin. The all-over label design had been planned to create the illusion of a completely black container, so labels had to have a depth dimension to cover the jars right from the break of the shoulder to the bottom. With most of the shoulder of the opal jar covered by the overhang of the black lithographed metal caps, the finished jars show only a hairline of white glass above the label. As a matter of fact, the labeler's accuracy of register proved to be within limits considerably closer than the customary $\frac{1}{32}$ -in. tolerance to which labels are conventionally cut and the label supplier is now supplying labels cropped to a tolerance of $\frac{1}{64}$ in.

The fact that the labels overlap at the back further adds to the need for accurate label cropping, because short or taper-cut labels would be instantly detectable at the overlap on inspection.

This overlap for a time presented what seemed to be a tricky glue problem.

The springy foil-and-paper labels refused to tack down at the overlap on the smaller jars. The wax content of the label ink was at first suspected as the culprit here. But this wax, which provides both anti-blocking protection to the stacked labels and a water-resistant glossiness, was proved innocent in experimental labeling with wax-free labels. Experiments with a number of resin-emulsion adhesives eventually turned up a formulation

which had the right characteristics to button down the overlap. Until the glue supplier produced this formulation, this property seemed a critical point, since the glue at the time of label application had to be sufficiently fluid to roll out smoothly over the glass under the label when pressure was applied and at the same instant had to hold the overlap against the natural tendency of the foil label to straighten. The adhesion here is not paper to glass, but paper to a part-foil, part-inked surface.

At this point another glue problem arose. The glue formulation which supplied the needed quick-setting properties at the labeling station could not be made to provide adequate tack-and-release characteristics at an earlier stage in the sequence of operations. It would not pull the label off the stack and then release it from the glue turret.

The problem had never come up before because in the hundreds of applications of this machine none had called for full labeling of such small containers with a comparatively stiff label material. Requiring the adhesive to perform the complex labeling job and in addition to serve as a label-withdrawing mechanism proved to be an excessive demand. The answer was to equip the machine with a vacuum label-withdrawing device consisting of a row of tubes branching off from a vacuum supply line.

These tubes are fixed to fit between the rotating flanges of the glue turret and are positioned so that the row of tube ends is in the same plane as the label on the bottom of the stack at the nadir of the label rack's travel. Vacuum is applied to this pipe array in a synchronized pulse, being available only when the label is actually presented.

The pulse of vacuum reinforces the glue turret's grip on the bottom label just enough to hold it, thus stripping it off the bottom of the stack as the label rack rises, then releasing it immediately so that it is held only by the glue tack.

The set of vacuum pipe arrays, easily seen in the photograph of the change parts, is an inexpensive addition to the machine and greatly relieves the demands made on the adhesive. It is expected to become a standard addition to the machine where stiff labels are being applied to small containers. Machine representatives, label supplier and adhesive

maker all cooperated closely in the studies of machine operation that eventually led to the adoption of this modification.

Continuous operation

The Sofskin operation is a continuous one which supplies, from the Bloomfield, N.J., plant, the demands of national distribution through drug, syndicate and variety stores, toiletry counters of department stores and grocery store and supermarket toiletry racks.

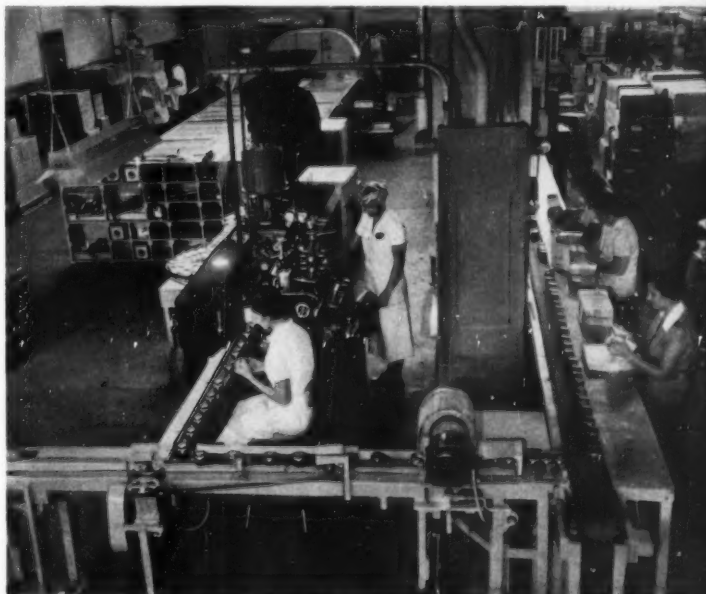
Packaging is automatic except for manual stages in feeding the line and case filling at the end. Jars are first bottom labeled on a four-up labeler which applies a small, round paper label carrying suggestions for use of the product, company address and other text that might clutter the display label. During application the bottom label is overprinted with a batch-coding number. Jars are blown free of any stray dust particles and filled on a dual piston filler with hand cream which is kept semi-liquid at 104 deg. F. Filled jars require no wiping and go directly into a cooling chamber where circulating air at 45 deg. F. sets the cream while the jars travel approximately 290 ft. along nine side-by-

side switchbacks. Glass lift-up panels in the table-high cooling chamber permit easy inspection of the jars as they move back and forth.

The cooled jars receive waxed-paper-lined, lug-fastened metal caps on a four-head capper. Lugs on the new caps now being used are formed so that their engaging edge is a rolled edge rather than the raw edge of the metal. This provides more secure closure against jarring and vibration in shipment. It also makes the inside of the lid look more solid and of higher quality.

Capped jars feed directly to the labeler's wide, tapered-input unscrambler, which can serve as an accumulator for as many as a hundred of the smaller-sized jars. This feature allows the filler, cooler and capper to operate through any minor stoppages of the labeler.

CREDITS: "Banks" labeler built by Morgan Fairrest, Ltd., Sorby St., Sheffield 4, England; distributed in U. S. by Stokes & Smith Co., subsidiary Food Machinery & Chemical Corp., Frankford, Philadelphia 24, Pa. Jars and lithographed closures, Hazel-Atlas Glass Co., Wheeling, W. Va. Labels, Foilcraft Printing Corp., 3611 14th Ave., Brooklyn 18, N. Y.



PRODUCTION LINE starts with capping and labeling at left side of "U" and progresses to hand cartonning at the right side. Labeler's change parts are in cabinet in back of the operator.

Design

Re-use holster for storing paint brush is part of package



Individual carton packages for Edward E. Robinson, Inc., paint brushes are aimed at protection to aid jobbers and wholesalers in reducing damage in reshipment of odd lots and providing self-service information for the rapidly expanding "Do-It-Yourself" market. They also include an interesting re-use feature for the consumer. Inside each individual carton is a "Brush-Pac" that serves as a storage holster for the brush. The Brush-Pac is made of machine-coated solid kraft with selected fibre content to withstand solvents without deterioration. After the brush has been cleaned, it can be placed in the Brush-Pac and hung on a nail or hook through the circular die-cut tab at the top.

Twelve of the cartoned brushes, complete with Brush-Pac, come in a counter display carton printed with helpful information for brush selection to aid in self-service merchandising.

CREDIT: Packages, Dishrow Mfg. Co., Inc., East Orange, N. J.

A break with tradition in the bacon field



The St. Louis Independent Packing Co. has introduced a completely new package for bacon—a long, narrow, cellophane-window carton. The company's thick-sliced, longer-cured Hickory Hill brand bacon slices are stacked one upon the other in this space-saving, easy-to-handle paperboard carton. The window affords visibility for the product through top and front panels. Introduced recently in St. Louis, this new-type bacon package is reported to have met with instant shopper approval. The carton is printed in brown, yellow and red, and creates a colorful and effective display when stacked in refrigerator display cases. The Hickory Hill brand name is given prominence on all four sides and both ends. A farm scene features the top panel of the carton, while the back panel illustrates an appetizing dish of cooked bacon and eggs.

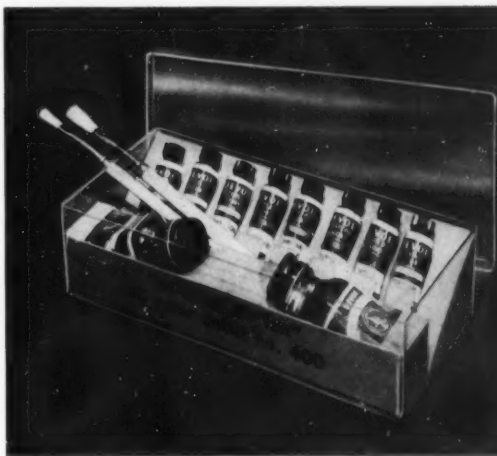
CREDIT: Carton, Sutherland Paper Co., Kalamazoo, Mich.

Histories

Transparent art-supply boxes stimulate the hobby market

Rigid, transparent polystyrene plastic boxes create a sales-appealing container for the small oil-paint sets produced by Devoe & Reynolds Co., Inc. The sets—designed for amateur painters and hobbyists, who do not depend upon painting for a living and therefore need an inducement to buy—stimulate initial and repeat purchases and encourage impulse buying by those using oil paints for the first time. A die-cut and scored inner platform holds eight metal tubes of different-colored oil paints, two glass jars of thinner and two paint brushes. Printed on the front panel of the platform, visible through the transparent plastic, is the legend "painting for fun," together with the set identification number. The box offers complete visibility of contents without exposure to dust or customer handling. The light weight of the plastic container reduces shipping costs.

CREDIT: Box, Tri-State Plastic Molding Co., Inc., Henderson, Ky.



Arm & Hammer brand goes to the drug department

A new medicine-cabinet-size package of Arm & Hammer brand bicarbonate of soda has been introduced by Church & Dwight Co., Inc. A metal pull-down spout on the side of the paperboard box enables the user to pour and measure the product easily. Box size and shape are convenient for storage in the medicine cabinet. The box, designed as a quality drug package, features the Arm & Hammer trademark on the front, back, top, bottom and sides for quick recognition on shelves of self-service drug departments, supermarkets and variety stores. Background of the box is white, with printing in three colors on coated board and varnished. The package face lists several common uses of bicarbonate of soda—for indigestion, as a tooth powder, a mouth wash and a gargle—while the back panel gives instructions for use in each instance.

CREDITS: Design, Jim Nash, New York. Box, Fort Orange Paper Co., Castleton-on-Hudson, N. Y.



FILM-WRAPPED LEMONS



PILLOW WRAP of crystal-clear 20-gauge Plofilm has an intermittent seal along its side seam. It permits some circulation of air and has proved a better preservative than tight-seal wrap, keeping lemons in perfect condition for five months or longer.

Ten years of research to find a film wrapping that would extend the sales life of citrus fruits appear to have been concluded successfully with the introduction by a California Sunkist grower of lemons individually wrapped in loosely sealed Plofilm. The lemons are handled on an automatic machine ingeniously adapted from a standard candy-bar wrapper.

For years attempts have been made in Florida and California to seal oranges and lemons in Plofilm that was tightly stretch wrapped and hermetically sealed, like a second skin. These attempts failed because it was impossible to eliminate all of the tiny mold spores from the skins of the fruit; these spores thrived in the airtight atmosphere and spoiled the fruit. California's Citrus Industry Research Assn. avoided this with a more permeable film and a loose, pillow-type wrapping which deliberately leaves unsealed gaps in the heat-sealed side seam to provide ventilation.

Instead of the huge special machine originally developed and built for stretch wrapping,* this new kind

of wrapping employs a basically standard machine that requires little packing-plant space and can be mass produced at moderate cost. The Escondido Lemon Assn., first to adopt the new method, already has three of the machines, successfully shipped three cars of wrapped fruit to Eastern markets last summer and is using the wrapper to the full extent of its facilities on this winter's crop.

According to C. Mark Reed, manager of the Escondido Lemon Assn., a Sunkist affiliate, the loosely wrapped lemons have demonstrated a shelf life of at least five months, as against an expectable one month for the best quality waxed but non-wrapped lemons. The lemons maintain their weight and appearance far longer in the wrapper intermittently sealed than in the same wrapper completely sealed.

This was only one of the surprising discoveries in many months of preliminary research and testing, which involved, in addition to painstaking trial-and-error adaptations of machinery, the application of a special type of Plofilm, designated as 20 N-1. This is an oriented, cross-tensitized

form of the rubber hydrochloride film, of 0.0002-in. gauge.

The preliminary research project was financed and directed by the Citrus Industry Research Assn., under William H. Tolbert, manager, and physiological testing was conducted by Dr. Roy J. Smith of the University of California's Agricultural Experiment Station.

At the Escondido plant, washed and graded lemons drop from a size-sorting machine directly into the infeed of one of the three wrapping machines, each of which is set up to handle a different size range. This infeed is a unique cam-action "shuff-leboard" formed of 32 sections of eccentrically shaped hard maple; it gently aligns the lemons and at the end deposits them three at a time on the conveyor belt of the machine proper.

Details of the machine's conveying and sealing actions—which are most unusual owing to the necessity for accommodating varying sizes and shapes of lemons, keeping each lemon pointing straight and handling it without bruising the delicate oil cells of the skin—will be discussed later. Suffice

*See "Second Skin," MODERN PACKAGING, April, 1947, p. 96.

With a ventilated jacket of special Pliofilm,
mechanically applied, California growers may have
the answer to the long search for a citrus wrap



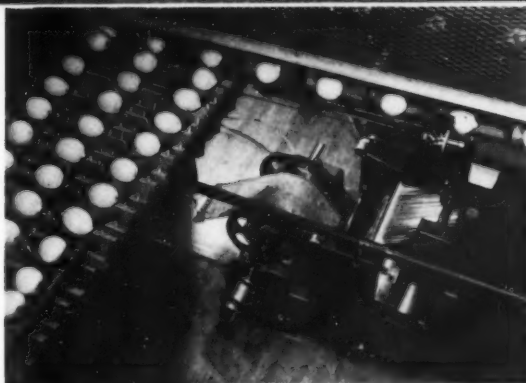
COMPACT MACHINE, specially adapted for handling delicate lemons, is shown in operation at Escondido Lemon Assn. It is completely automatic and operates at a speed up to 160 lemons per minute.

to say here that each fully automatic machine discharges up to 160 wrapped lemons per minute, dropping them directly into shipping boxes. Between them the three machines will handle a major portion of Escondido's first-grade lemons.

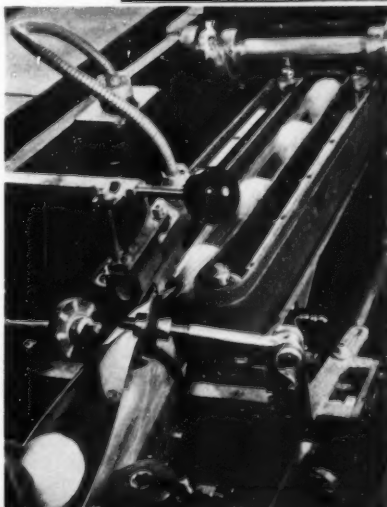
Because of the increased shelf life, virtually eliminating spoilage losses, and other advantages, distributors and dealers have demonstrated a willingness to pay a premium price for the film-wrapped lemons sufficient to cover the packaging cost. Consumers also appear to recognize the wrapped fruit as being of premium quality. In one preliminary test in Portland, Ore., retailers raised the price 40 cents on the box over the same lemons, unwrapped, in the next bin and found that housewives still preferred the wrapped lemons.

Background

The development which has culminated in the pioneering Escondido operation goes back some four years to a small group of growers in the Oxnard Citrus Assn., one of the largest of the Sunkist affiliate groups, who sought some means, through packag-



SHUFFLEBOARD FEED (upper left) aligns lemons dropped from sizing machine, deposits them three at a time in pockets of special conveyor belt into wrapping machine. Lemons must be kept straight and free from bruising. Note film feed at base of unit.



HEART OF OPERATION is gathering of film into an intermittently sealed tube into which lemons are led and deposited. Top seal is effected by notched wheel (under black ball) just as lemons enter side-compression belts.

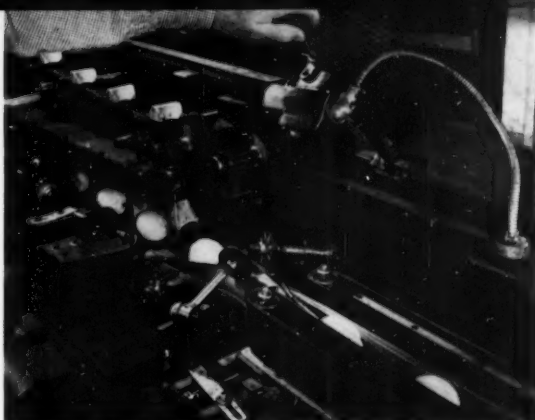
ing, of improving the merchandising of citrus fruit generally. Attention was focused on lemons as being the more difficult fruit, because of their delicate skin and slower sales turnover.

Working through their Ventura County Citrus Growers Committee, the growers called in packaging-materials and machine suppliers and enlisted the technical advice of Dr. Smith at the University of California at Los Angeles. Later the project was taken over by the industry-wide Citrus Industry Research Assn. Mr. Tolbert is manager of both industry groups.

It was agreed that the objective should be a practical transparent wrap. The objection to the standard tissue wrap for citrus fruits is that it is opaque and consequently is almost always removed from the fruits when they are displayed for sale. The consumer apparently can't be convinced of the quality of the fruit without seeing it. Diphenyl-treated tissue helps to preserve the fruit—but the protection ceases at point of sale when the wrap is removed.

Although the standard tissue wrap is itself inexpensive, it costs money both to put on and take off. It can only be applied by hand. This forms a major part of the total labor cost of hand packing, which is estimated at 25 cents per standard box for lemons and 16 cents for oranges. Cost of labor to remove the tissues at point of sale adds an estimated 35 cents per box in the case of lemons and 20 cents for oranges. Thus, as Dr. Smith pointed out, if a transparent film could be used which the customer would tolerate without removal and if mechanical means of applying this film could be found, the total labor saving per case of lemons would be 60 cents, split 25-35 between the packer and the retailer. This might be enough to pay for both film and machine—and a better, more salable product with less waste would result.

Previous experiments had convinced Mr. Tolbert and Dr. Smith that a thin-gauge Pliofilm was the best film for this purpose. Initial attempts were made with a completely sealed, skin-tight stretch wrap, using standard formulations of Pliofilm. A machine was used which spun a sheet of Pliofilm tightly around the lemon when held against a rubber wheel. Despite the greatest care in handling, damage to the delicate oil cells in the lemon skin resulted in a high incidence of blue mold decay. Once a mold spot



TOP VIEW of the sealing operation, showing notched heat-seal wheel raised. Note film being formed into tube, the metal pushers moving back on continuous chain after dropping fruit on film and the side brushes which insure the alignment of fruit.

developed, it seemed to thrive in the airtight atmosphere.

Almost by accident it was discovered that a loose, bag-type wrap, with gaps in the heat seal, worked better. Porosity and a certain degree of ventilation seemed to be desirable. This started the film supplier on a search for a more porous formulation and resulted in the bringing out of the 20 N-1 grade. Experiments by Dr. Smith proved that the fruit in this film would keep not only as well as in the old tissue wrap, but far better—up to five times as long. What was needed was a delicate balance between moisture retention and respiration, with the film holding enough moisture to keep the fruit from shrinking, yet admitting enough air to prevent the development of decay.

Machine development

Once the wrap was perfected, the search began for a machine that would handle it automatically at high speed. Because of the delicacy of the lemon skin and the odd sizes and shapes of the fruit, this was no ordinary problem. The researchers finally were attracted to an in-line machine which had long been popular for the wrapping of candy bars and which recently had been adapted to the wrapping of fragile, chocolate-coated ice-cream bars.¹ Experiments proved that this machine would handle the 20-gauge Pliofilm and the work of adapting it to lemon wrapping started at a Port Hueneme packing house belonging to the Oxnard Citrus Assn.

¹ See "Stick and All," *MODERN PACKAGING*, May, 1951, p. 86.



DELIVERY CHANNEL, showing revolving end-seal gates (background) closing on envelope that has just been cut off from tube. Note the ventilating gap in side seal of the lemon in foreground.

During more than a year of tests at Port Hueneme, the suppliers worked closely with the packers and their consultant. The problems of handling the product were met, one by one, by means of special devices. The "shuffleboard," the special conveying devices, the special film take-off, the intermittent heat sealer and cut-off were worked out by trial and error.

Some of the lemons originally wrapped in the perforated "pillow" pack were found to be in good condition after being held in the plant for eight months. Once the machine was perfected, several hundred cases were shipped from Port Hueneme as

a market test. They brought a premium price and uniformly good reports.

The development had been watched with particular interest by Mr. Reed of the Escondido association. Escondido, near San Diego, is at the southern end of the California lemon belt.

Convinced of the success of the method, Mr. Reed placed an order for three of the machines. The first one was installed at Escondido in time to catch the last of the 1952 mid-year crop and altogether more than 3,500 half-boxes of Pliofilm-wrapped lemons were commercially marketed last year. All three machines are now operating at Escondido on the early 1953 crop.

Details of operation

At Escondido, lemons in their field boxes, having already been washed and waxed, are trucked out from cold storage in nine-high stacks, sorted for quality by hand on a grading belt and then put through an ingenious sizing machine, which divides the fruit into three sizes and routes them on belts to the proper wrapping machine. Dumped at random onto the 6-ft.-long "shuffleboard," the lemons gradually form ranks of three as they jiggle slowly over the revolving wooden members down the board toward the machine's in-take conveyor. The action of this ingenious unscrambler was a matter of painstaking study to get effective movement without bruising the delicate lemon skins.

The shuffleboard is synchronized with the machine so that it deposits three lemons on the conveyor belt just ahead of three curved metal spacers which travel with the belt and gently nudge the lemons along while helping to hold them straight, in line with the belt. It is essential that each lemon be pointed lengthwise when it moves into the sealing mechanism. A vibrator under the belt helps keep the lemons in place and two laterally rotating brushes straighten them up, if necessary, just ahead of the sealer.

Plioilm from a roll is fed from the lower part of the machine. The web goes back to a take-off for tension and is then brought back and drawn together over a funnel-like mandrel, forming a tube. Just as the two edges of the film meet, they travel under a heat-sealing wheel which is notched to give the intermittent seal desired.

The lemons on the conveyor mean-

while are moving, precisely spaced, into this tube of film. Rubber pressure belts catch and hold them at the sides. Then a heated knife drops down just ahead of rotating end-seal gates to cut the tube. While the forward end of the envelope is being sealed, the back end is being cut.

The only attendant actually required for the machine places and removes the shipping cases into which the wrapped fruit drops at the end. The Escondido plant, like most other Sunkist houses, recently adopted corrugated shipping cartons, half the size of the conventional wood crate, and has had particularly good results in shipping the film-wrapped lemons in them.

A vibrator on the delivery table helps to shake the lemons down in the carton so that they may be accurately filled by volume rather than by count—a practice recently approved for out-of-state shipments by the California Department of Agriculture.

Elsewhere in the industry, the corrugated half-cases usually are treated on the inside with diphenyl, a mold-inhibiting chemical, but with the Pliofilm-wrapped lemons at Escondido this has been found unnecessary.

The attractively printed cartons go through a conventional case sealer and are then ready for return to storage or for shipment.

Mr. Reed feels that with his film-wrapped waxed lemons and corrugated half-cases he has the maximum of packaging protection so far achieved for citrus fruits. There have been no instances of the contact mold which, with unwrapped lemons, some-

times starts in one fruit at the top of a 15-box stack and travels like wildfire through the entire stack. The wrapped lemons retain their original weight and appearance for five, six, even eight months. Air inside the pillow package holds a certain amount of oxygen to neutralize the gas given off by the lemon's natural respiration; the air also acts as a cushion to minimize rupture of oil cells in the fruit skin.

Retailers appreciate the labor saving in not having to remove and discard wraps. They offer a more sanitary fruit, protected from contact, in line with modern merchandising practices. And even at this end-of-the-line point the protection against mold continues, for mold of the fruit can start from dirt which might be picked up in the market.

The opportunity for brand identification that will carry through to the consumer is obvious. Escondido is now studying means of imprinting the film with the Sunkist emblem.

The entire citrus industry, through the Citrus Industry Research Assn., is of course keeping a close watch on the Escondido operation and if the indications continue as favorable as they now appear, it is safe to say that many additional brands of lemons, and possibly oranges and grapefruit as well, will shortly appear in individual Pliofilm jackets.

CREDITS: 20 N-1 Pliofilm, Goodyear Tire & Rubber Co., Akron, Ohio. Specially adapted "Campbell" wrapping machine, Hudson-Sharp Machine Co., Green Bay, Wis.

CORRUGATED CASES, shown here in railroad car, hold half the quantity of former standard crate and have proved very popular with distributors and retailers because of their ease of handling. These lemons are from Fallbrook, another of the Sunkist grower group.





Packaging Pageant



2

1 Distinctive new 12.8-oz. round cruet packaging San Martin Vineyard's wine vinegars are attractively styled to be placed right on the dining-room table. Cellulose bands, printed with trade and product name, cover the long necks of the bottles. Bottles, Glass Containers, Inc., San Francisco. "Celon" cellulose bands made by The Celon Co., Madison, Wis., and supplied through Northern Glass Co., San Francisco. Caps, Western Crown Cork & Seal Corp., San Francisco. Foil labels, Kirby Cogeshall & Steinau Co., Milwaukee.

2 A five-fold sales increase was reported after King Korn Popcorn adopted this new cellophane package, redesigned for stronger display appeal on store shelves. Old colors were replaced by a four-color combination of red, white, blue and yellow. More of the package surface is used for display copy. Specific use suggestions to encourage purchases appear in a crown design at the top of the bag. Price is given greater emphasis. Package, Cello-Masters, Inc., New York.

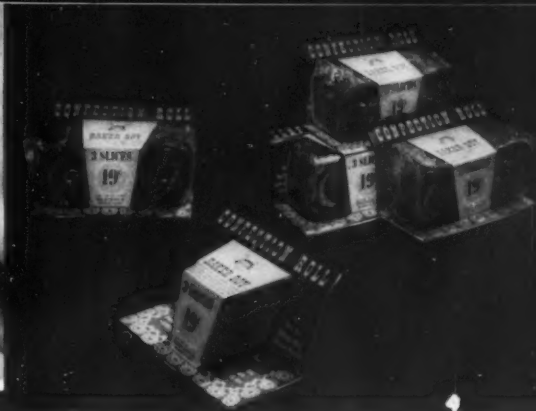
3 A 12-in. ruler is printed along the length of this package for "foot long" frankfurters called "Markies," made by the Grand Taste Packing Co. Printed on the ruler are suggested uses of the franks when cut to various sizes. Inch marks on the ruler make a guide for the knife when cutting the franks for cocktail tidbits, for picnic use, broiling, etc. In addition, dotted-line cutting marks are indicated at intervals along the entire length. Package, Milprint, Inc., Milwaukee.

7





3



4

4 Die-cut, colorfully printed sleeves add an interesting display feature to Baker Boy Bakeries' cellophane-wrapped three slices of "Confection Roll." The package requires only one die-cutting operation and no assembly. Printing is on one side. They nest without wasted space in shipping cartons. Package, David Levy, Los Angeles.

5 The addition of fruit and berry pictures on the new labels for Crosse & Blackwell's line of preserves now gives the instant product identity so necessary for super-market selling and also heightens the interest in selection which shoppers like today. White background gives prominent display to illustrations, brand lettering and product name. Labels, Gamse Lithographing Co., Inc., Baltimore, Md. Duraglas tumblers, Owens-Illinois Glass Co., Toledo, Ohio. Lithographed metal closures, White Cap Co., Chicago.

6 Lever Bros. introduces a new blue and white wrapper to promote its new 5-cent Swan Floating Toilet Soap. The price, which will be promoted strongly through an advertising program stressing the economy of this quality product in today's high-priced market, is displayed prominently in the upper right corner. Design developed by Raymond Loewy Associates, New York. Wrap, Kalamazoo Vegetable Parchment Co., Kalamazoo, Mich.

7 The problem of setting off to advantage a luxury-fitted evening vanity carry-all has been solved cleverly and reportedly at moderate cost by the use of a set-up box with one-piece, scored tray of folding construction that fits

into the base to form a curve into which the carry-all fits. The box is tight wrapped in gold and black paper, lettered in gold and black. The paperboard tray is laminated with gold paper. Called the "Pandora," the carry-all with fittings are made by the Wadworth Div. of Elgin National Watch Co. Box, W. C. Ritchie & Co., Chicago.

8 Further swing to metal containers for frozen foods is indicated by the adoption of metal cans for frozen concentrated split pea soup, packaged by Andersen's Foods, Inc. The company reports that the switch to metal containers resulted in streamlining operations and packing the product more efficiently. Cans, Continental Can Co., Inc., New York.

9 A new, two-roll package for Verichrome film—called the Kodak Verichrome Duo-Pak—introduced by the Eastman Kodak Co., is aimed at increased unit sales. Similar in design to the standard package but double the size, each carton contains two foil-wrapped rolls of film in either 620, 120 or 127 size. Picture-taking tips are printed on back of the carton.

10 A new application of the vapor-vacuum seal is for salad and cooking oil made by the Kraft Foods Co. The vapor-vacuum cap is reported to prevent oxidation of the oil and to maintain it at peak freshness and flavor. A key to pry off the cap is being attached to each bottle during the introduction of the new package.

8

9

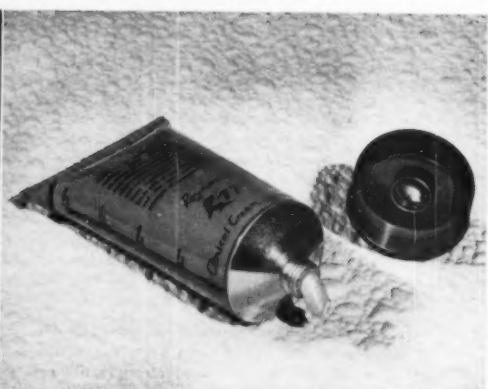
10



'WITTY KITTY' was the British packaging editor's comment on this clean and simple design for a can of cat food and its easel display--and that pretty well sums it up.



UPSIDE DOWN gives both display impact and convenience in use to a fat collapsible tube for a cream shampoo. Smartly designed plastic cap makes it possible to achieve this.



STRICTLY functional and yet appealing, is the idea of the oil-crozier spout on a polystyrene container for lubricating oil. Coloring the oil green makes it aesthetically pleasing and provides a sales slogan. Package and product are played up on a smart and compact counter display stand.



Some recent offerings of our trans-Atlantic cousins display a sense of humor as well as sound design

British wit

Americans usually expect British merchandise to be solid in quality, but as for packaging . . . well, maybe just a little hidebound. This impression has been heightened in the last 10 years by two factors: (1) the war and postwar austerity which has necessarily affected British design because of the shortage of materials and (2) the British habit of looking with unbounded admiration toward the bright new packaging ideas from this side of the ocean.

It is refreshing, therefore, to note in recent issues of our British contemporaries, *Sales Appeal* and *The British Packer*, some packaging conceptions from over there which for wit and freshness would do credit to the most lively of the live-wire Americans.

Cat food that purrs

Take, for example, the package and display unit for Purr, "the fortified fish dish" for cats. Starting with a can top simply and beautifully designed to look like a cat's grinning countenance (including a lettering of the brand name which can almost be heard to "purr"), the designer progressed to the idea of a simple die-cut counter display which is built upon the cat's-face idea by adding a couple of upstanding ears.

The sight of the package at home must irresistibly conjure up an amused recollection of the way the package looked in the cat-eared easel frame at point of sale, which should go a long way toward bringing the

customer-cat willing-back to point of sale.

The Purr package was designed to bear a family resemblance to the manufacturer's package for his successful Woof dog food. Cooper, McDougall and Robertson, Ltd., is the maker of Woof and Purr—certainly a pair of brand names to conjure with!

Tube that stands on its head

The idea of something (or someone) stood on its (or his) head seems to have a perennially potent impact on the British funnybone, so there were some quips mixed into the admiration with which packaging circles overseas greeted Raymond of Mayfair's new collapsible tube package for Rx 77 Clinical Cream Shampoo. Replacing a conventional-looking tube, the new model is also a completely conventional collapsible tube basically, though of somewhat more broad-shouldered proportions than usual. The deep-skirted, flat-based plastic cap which lets the tube stand on its head has a small collar centered inside to fit over the normal threaded neck of the tube.

The Raymond's tube provides the very real advantage of giving a collapsible tube a stable base on which it can be stood on display or in the family medicine cabinet. It might even solve the perennial family problem of persuading a wife (or husband) to squeeze a tube from the bottom—the bottom now being at the top. At any rate, Raymond's advertising is reported to have made the most of

the opportunities presented by the new package.

Though we would hesitate to swear that this is the first use of this idea we have ever seen, it must be admitted that the British designer had his wits about him in selecting it for a quality hair product. He secured the desired effect of elegant sophistication while retaining for the packager the basically simple, efficient container which might otherwise have

STRICTLY CRAZY is the bottle for a cocktail product which has a set-up box ingeniously designed to bend with bottle.



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EASE OF OPENING is provided by the simple idea of making a bag header an inside-and-out collar rather than a mere saddle label.



ALTERNATING beer bottles in the case this way saves board and shipping cubage.

been abandoned as too reminiscent of plebian tooth paste.

The old oil transformed

A humorist might be able to work up quite a routine with Bigren, a lubricating oil for sewing machines and other household appliances which has had its machine-oil odor removed and replaced with something like "... the odor which greets you as you enter the better kind of hairdresser's shop." From the merchandiser's point of view, however, it makes a lot of sense. So does the addition of some green dye to the oil to give it an attractive emerald color. Bigren is marketed by Aladdin Industries, Ltd., which reports that the product's appeal to the feminine purchaser has been successful "in a big way."

Bigren's package is both unusual and highly functional—a fully transparent polystyrene container with an off-center fixed spout and a distinctive angular profile. The shape serves to identify the package, but it was also planned to make it easier to get oil on out-of-the-way parts of machines and to speed up the flow of oil when the container is nearly empty. Naturally a transparent material was needed to show the product's color and the transparent polystyrene is sufficiently pliable for traditional dispensing by squeezing the sides of the container.

The yellow-and-green Bigren label is straightforwardly businesslike, thereby preventing the package from taking on too incongruous a resemblance to that of a cosmetic product. All in all, the Bigren package may not be quite so novel as the product itself, but it does an excellent job of reflecting the sales objective of

those who developed the product and it deserves a share of the credit for the product's success, which was immediate and substantial, according to British accounts.

A collar for the bag

The idea of a printed paper collar for a cellophane bag which forms the bag's closure and facilitates its opening has been neatly worked out by H. S. Whiteside & Co., Ltd., in the package for the company's Sun-Pat mixed nut kernels. The basic intention is to make it easy for the consumer to open the bag without starting a tear in the cellophane—an important consideration with a product the customer may not want to eat all at once.

With a standard cellophane bag, Whiteside uses a special header of printed paper coated on the blank side with a special adhesive. The paper, folded into the M-shape shown in the drawing accompanying the photo with this article, is inserted into the top of the bag so that the adhesive comes into contact with both sides of each wall of the bag. The center downfolded portion of the paper header closes the bag. Heat and pressure applied in a manner similar to that used for closing a heat-seal film bag fuse the paper header to both sides of each wall of the bag.

Because the sides of the bag itself are not glued or fused to each other, they do not have to be torn to open the bag. The consumer merely slits or breaks the paper header along its center crease, leaving the bag intact and reinforced by a sturdy paper collar. Whiteside's patented header would overcome the tendency of some packaging films to tear too readily

once a tear has been started and might therefore permit use of lighter-weight films for some products. It might also be helpful with some of the tough films which are difficult to start a tear.

Crazy—or not?

Little comment is required about the rakish humor of Gale, Lister & Co., Ltd., in selecting the inebriated-looking bottle illustrated here for their Crazy Cocktail, a wine cocktail. The two-part label helps to emphasize the hunch of the bottle and the vertical lines on both the carton lid front and on the bottle sealing band help to accentuate the effect by contrast. This package should help to get many a British party off to a jolly start even before the contents begin to flow.

The more sober purpose of conserving shipping cubage is the prime objective of the shipping case for J. & R. Tennent's Lager Beer, a product of the company's Wellpark Brewery in Glasgow, Scotland. By the simple expedient of inverting half the bottles in each case, the company manages to get two dozen bottles of lager into a space not very much larger than would otherwise be required for 12.

Obviously the concentrated loading, though it saves space, makes extra demands on shipping-case strength, particularly in view of the bursting pressure that could result from the wedging effect of the bottles under stacking pressure. Tennent allows for this, as the cut-away shipper in the photo reveals, by using a sturdy double-wall corrugated board for the case. The bottles are cushioned by strips of double-face board which adapt to the interlocking curves of the bottles themselves.

Safer drug labeling

Special machine takes thermoplastic labels from a roll
for mechanical control, saving Sharp & Dohme \$50,000

With human lives constantly in the balance, correct labeling of drug containers is a must for the pharmaceutical industry. However, maintaining the airtight system of checks and controls needed to prevent incorrect labeling has always been a costly proposition for the industry.

As part of its continuing program of standardization, mechanization and organization,* Sharp & Dohme discovered that it cost the company something like \$100,000 a year just to handle and check straight or die-cut labels. With both control and cost savings thus in mind, electronic and mechanical means of labeling were considered.

Mechanical methods, it was decided, offered the most promise from the standpoint of initial research expense and equipment costs. As a result, Sharp & Dohme was able to install thermoplastic roll labeling, provide complete mechanical control and effect an estimated saving of approximately \$50,000 a year.

The new system works as follows: Roll labels, printed and delivered by the roll so that copy is provided for one product only, are fed from the rear of a newly developed labeling machine. In one continuous, automatic operation, the labels are first coded by a novel device with a finishing or control number. The labels are then cut off by a bar and rest momentarily on two metal arms that heat the labels to the proper temperature for adhering to the container.

One of the first uses of the new labeler is on the packaging line handling tubes of Sharp & Dohme's "Caligesic" ointment. A full roll contains 3,000 labels. The machine, it is said, can be adjusted to work on numerous container shapes and sizes.

Failureproof operation is the most important advantage derived from the new installation, according to Sharp

& Dohme, but there are also these important economy factors:

1. Printing labels on a roll press in one, two, three, four or five colors is faster and less costly than the conventional printing on a flat-bed press.

2. Paper in rolls is less expensive than in sheets.

3. Rewinding labels in rolls eliminates cutting operations, inspection and wrapping.

4. Automatic machine coding directly on labeling unit eliminates extra handling for coding.

5. Additional handling is eliminated where, after labels are coded, they have to be re-inspected.

6. Glue problems are not involved.

Although the principle of roll-label printing has been in existence for some time, the use of roll labels on a labeling machine for Sharp & Dohme's particular problems required considerable development and is said to be new

in the drug and pharmaceutical field.

Among the problems encountered was the need for a feed device that would permit a speed range from 50 to more than 100 packages a minute. Not only was such a device developed, but it also enables the operator to work with fewer motions than are required by the ordinary hand-fed, semi-automatic labeling machines.

The factors of cutting tolerances, quality printing, the type of ink necessary to print on a roll press without using starches for drying, the novel idea of the coding-unit imprint which dries instantly and will not smear, and numerous other problems were considered and overcome.

CREDITS: Roll-labeling machine, Dumatic Industries, 12th St. below Jefferson, Philadelphia 22, Pa. Thermoplastic labels, Globe Ticket Co., 112 N. 12th St., Philadelphia, Pa.

SWITCHPROOF thermoplastic roll labels are coded with a control number, heated to proper temperature and applied to tubes of Caligesic ointment by this specially developed machine. Continuous feed eliminates any chance of a wrong label being used and the extra inspection to assure accuracy is eliminated.



* See "The War on Costs," MODERN PACKAGING, April, 1952, p. 81.



How much can your package take?

DOES your package still look its Sunday best after eager customers have done their Saturday worst? Does it keep its freshness and appeal after being handled by an endless procession of shoppers?

It will — if it's wrapped in PLIOFILM. Goodyear's tough, transparent film is gleaming proof that shelf life can be beautiful.

PLIOFILM is so strong, it doesn't split or rip, even when roughly handled by self-service

shoppers. It keeps wanted moisture in, unwanted moisture out. It preserves quality, taste, aroma, appearance—drastically reduces returns and rewraps.

Could your product benefit by these advantages? The Goodyear Packaging Engineer will be glad to show you how — and will help you tailor a PLIOFILM package specifically to meet your needs. Write him at Goodyear, Pliofilm Department W-1, Akron 16, Ohio.

We think you'll like "THE GREATEST STORY EVER TOLD"—every Sunday—ABC Radio Network—THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network



**GET TO KNOW THE MAN
WHO KNOWS YOUR PROBLEMS**



Let the Goodyear Packaging Engineer draw on his experience to help solve your packaging problems. He'll help design a PLIOFILM wrap that's tailor-made for your product. Write him today.



Good things are better in

*Plio*film

COULD YOU USE THESE

*Plio*film

ADVANTAGES?



IT'S STRONG!

PLIOFILM produce bags hold up to 10 pounds without danger of breakage.



IT'S LIQUIDPROOF!

PLIOFILM is so moisture-tight, leakageproof, it safely seals pickles, sauerkraut, in their own flavor-making brine.



IT KEEPS MOISTURE OUT!

Crackers, tablets and other hygroscopic products stay crisp and dry in PLIOFILM.

Pliofilm, a rubber hydrochloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

Fusible plug in base
protects Spray can
against mishaps, meets
postal requirements
for safe mailing

Aerosol safety plug



SAFETY FEATURE on this aerosol is the soldered plug in the bottom of the can, which will melt if exposed to fire and vent contents.

Postal regulations don't permit the mailing of aerosol cans unless they are properly equipped with a safety device to reduce the danger from special hazards which, our conservative postal authorities still suspect, might be involved in carrying this type of pressurized container. Postal shipment is not used for most aerosols, but for Spray, an aerosol plastic coating formulated for use by artists and graphic arts craftsmen, all merchandising is direct and distribution calls for small-lot shipment by mail.

Acrolite International, Hillside, N. J., maker of the new clear acrylic-base plastic coating, has accordingly developed a fusible metal alloy plug, inserted in the bottom of an otherwise conventional aerosol can. When the can is exposed to high temperature, the plug melts and releases the contents before the heat can have had

an opportunity to build up an explosive pressure.

Aerosols in normal shipment by freight or express come under ICC regulations which provide for a safety margin well in excess of normal handling risks. However, there is always a chance that an aerosol can might be exposed accidentally to flame or high heat for an extended period. In such cases, even though the contents are not flammable, excessive pressure built up by abnormal heat is an element of danger. Hence the idea of a fusible plug may have possibilities for other non-mailing aerosol packages, especially those most likely to be exposed accidentally to heat—for example, a food product used near a stove, or a household product that might be carelessly left on a radiator for any length of time.

Acrolite's fusible plug, for which a

patent has been asked, consists of an alloy metal that melts at 210 deg. F. Spray aerosols equipped with this plug have been classified "mailable" in accordance with Article 35 (e), Chapter IV, Postal Guide, which reads as follows:

"Aerosol type not exceeding 16.6 fluid oz. capacity, charged with non-liquefied carbon dioxide or other non-liquefied gas, approved for mailing to not over 55 lbs. per sq. in. at 70 deg. F. and equipped with a fusible plug safety device approved by the Bureau of Explosives which will prevent explosion of the charged cylinder when placed in a fire. An approved content of non-toxic, non-flammable or matter not of a nature which might damage other mail must be used. The words 'Compressed Gas' and the proper name of the article shall be plainly marked on the outside of the parcel.

There is a limit of six 16.6-oz.-size cans, or twelve 10-oz.-size cans in one parcel."

At one time during the developmental stage, flux with a melting point lower than 210 deg. F. was tested by Acrolite, but was found too soft to prevent breakage and leakage. Prior to the use of the fusible plug, a spring-bearing type of safety valve was experimented with, but it proved unsatisfactory because of leakage. Also, the active ingredient tended to seal the valve and render it inoperative.

The fusible plug now in use was tested in comparison with aerosols not equipped with safety releases. The test procedure consisted of placing two standard-type metal cans of Spray in a wood bonfire. After about 10 minutes, the bottom of one can was blown out and the can body driven against a wire screen shield with such force that tools were required to extract the can from the screen. The other can burst some minutes later and the can body was projected about 200 ft. through the air, striking and denting a metal drain pipe. It should be noted that a fairly long exposure to direct heat occurred before the pressure burst the cans.

Two cans equipped with fusible plugs were then placed in the wood

bonfire. One can vented after two minutes; the other after five minutes. Neither can moved appreciably from its original position in the fire. Clean holes were found in the bottoms of the cans where the plugs were separated and released from the can bottoms by melting. The tests described were conducted by the Bureau of Explosives.

In equipping cans with safety plugs, a $\frac{1}{8}$ -in. hole is drilled in the bottom of each can and the edges of the hole are ground smooth. Twelve cans at a time are held in a jig while the holes are filled with metal alloy, soldered into position with a standard type of hand-soldering equipment. The bottom of the can is then sprayed with an acrylic coating to prevent rusting around the edges where the plug and can bottom are joined. When the cans are filled, they are tested by immersion in a hot water bath to detect leaks.

The Spray can is labeled with a wrap-around paper label. A design pattern of dots is employed to color code the various formulas in the Spray family of coatings. The dot color code is also carried over into the packing and merchandising materials. Shipping clerks, for example, label shipping containers with the proper dot color

code, thus providing a constant inventory identification according to formula type. The dotted design, printed in identifying color, is also employed on advertising folders and other mailing pieces.

The back panel of the Spray label incorporates a re-order coupon to be detached from the label when new supplies are desired. This eliminates the need for including a separate order blank with shipments and insures that the re-ordering coupon will be readily available so that re-ordering will not be put off or forgotten. The technique of printing the re-order coupon right on the label has, of course, special advantages in direct selling.

The success of the product depends so much on automatic selling that repeat ordering cannot be made too easy.

CREDITS: Cans, Crown Can Co., Erie Ave. and H St., Philadelphia 34, Pa. Valves, Precision Valve Corp., 700 Nepperhan Ave., Yonkers, N. Y. Propellant, E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del. Loading, Fluid Chemical Co., 860 Summer Ave., Newark, N. J. Label design, Clerico Associates, 307 E. 44th St., New York. Labels, Manson Printers, 310 Elizabeth Ave., Newark, N. J.



SPECIAL DRILL AND BRUSH forms $\frac{1}{8}$ -in. hole in can bottom, at the same time cleaning and smoothing surface to be soldered for a strong, leakproof juncture.

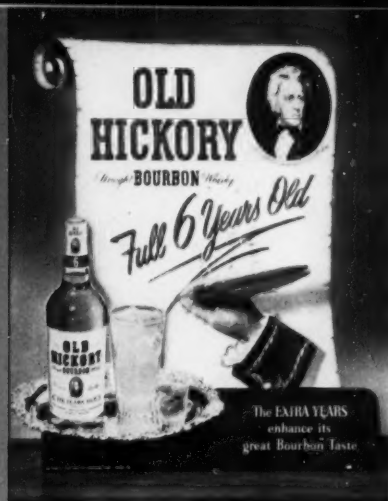
SOLDERING of cans is done with the cans held in a jig to keep the solder from being jarred or moved while it hardens.



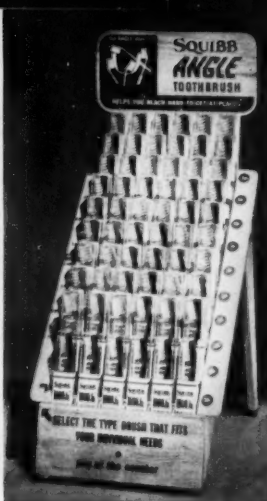
EASY TO USE, Spray acrylic-base plastic coating is specially formulated to provide the advantages of an aerosol in applying a protective coating to artwork.

RE-ORDER BLANK is printed directly on the label where it cannot be lost or misplaced, thus encouraging prompt repeat ordering.





Old Hickory's new display combines action and illumination. On the parchment scroll background, the reproduction of a hand holding a real quill pen moves back and forth, underscoring "Old Hickory . . . Full Six Years Old," which lights up as the pen completes its move to the right. Display, Einson-Freeman Co., Long Island City, N. Y.



The entire line of Squibb Angle tooth brushes—six of each of 10 categories, each designated as to type and price—are clearly visible for self service in this counter display. The unit, 13 by 22½ by 10½ in., is of lime-finished oak and lacquer-sprayed composition. Display, Kay, Inc., New York.



A fountain dispenser for single servings of Anacin headache tablets consists of a cartridge of 125 tear-off strip packets that fits in a carton die cut for easy dispensing. The carton rests on a polystyrene plastic base. Base, Progressive Plastics Mfg. Co., New York. Carton, General Carton Co., New York. Unit packets, Ivers-Lee Co., Newark, N. J.

DISPLAY

Nestle Co., Inc., uses this display carton made of high-strength board to pack 75 of its chocolate bars. The die-cut cover folds back to display the carousel design in red and blue against the white board. Display, Thames River, Conn., division of Robert Gair Co., Inc., New York.



Lentheric's new Cream Sachet Perfume is being merchandised in this counter display that holds 12 packaged jars in a cellulose acetate tray—four each of three different fragrances. Back display card prominently indicates the fragrance in each row and the \$1.65 price. Individual package designs are visible through the transparent plastic tray. Display card, Ambassador Arts, New York. Tray, Acetate Box Co., Brooklyn, using Monsanto Vuc-Pak acetate.





Alka Seltzer's colorful window display is a four-part unit that may be used together or separately, thus making it suitable for any sized window. Focal point of the display is the center card dominated by a reproduction of an attractive girl ready to drink Alka Seltzer. Side cards promote Tabacin and Bactine, while the lower-level display cards promote One-A-Day Multiple Vitamins—all products of Miles Laboratories, maker of Alka Seltzer. Lithography is in 10 colors. Displays, Forbes Lithograph Mfg. Co., Boston.



A sales increase of about 40% has been reported by Rite-O, Inc., since the introduction of this display shipper for Plasti-Top thumb tacks in decorator colors. Designed to promote impulse sales, the one-piece carton with self-locking ends provides strength for protection in shipping and handling. The die-cut back piece of the display carton gives prominence to product and company names. Display shipper, Hinde & Dauch Paper Co., Sandusky, Ohio.

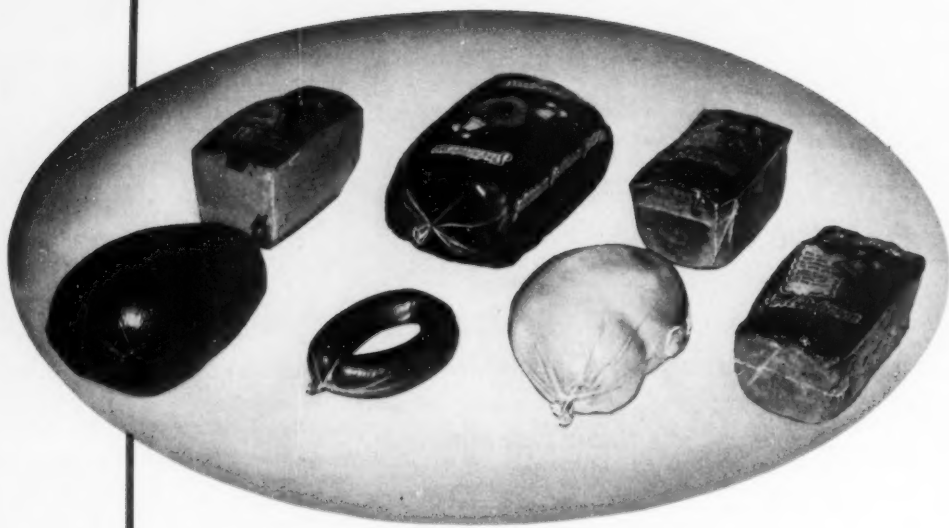
GALLERY

A combination counter display and tester stand for promoting toiletries manufactured by "4711" Ltd., is injection molded of polystyrene plastic in gold and blue, carrying out the scroll design of the company's labels. The display stand is molded with three recesses—two for holding bottles of Tosca and La Ronda Oil of Cologne and one for a bar of White Rose Transparent Glycerine Soap. The compact unit measured $3\frac{1}{2}$ by $3\frac{1}{2}$ in. Design, Irving Woolf & Co., Chicago. Molded display stand, K.C.S. Co., Milwaukee.



Four-color easel counter display cards for Modglin Co.'s Perma-Scrub pot-cleaning utensils and Whisk-Off whisk brooms are for use at check-out stands and prominent traffic spots in self-service outlets. One dozen items fit two deep into two die-cut and scored pieces on each card. Displays, Milprint, Inc., Milwaukee.





Plastic meat casing

Saran-type copolymer film, shrunk
to skin-tight fit, gives better appearance
and longer sales life to luncheon meats

Despite the rapid expansion which has been taking place in self-service merchandising of pre-packaged luncheon meats, there is still a large volume of these products being sold on a "sliced fresh when purchased" basis. In the Chicago area it is reported that close to 70% of all sausage sales are of this type. Many consumers, meat retailers and sausage manufacturers contend that unsliced luncheon meats have superior appearance and flavor, since only a minimum amount of product surface is exposed to air and light.

Maintaining brand identity at the point of sale has always been a problem with unsliced meat loaves and other types of luncheon meats. The relatively short storage life of some of these products, as well as the diffi-

culty of handling and slicing them without adversely affecting product appearance is another problem which has long plagued manufacturer and retailer alike.

The recent experience of Scott Petersen & Co., Chicago, a producer of top-quality smorgasbord sandwich meats, indicates that many of these difficulties may be overcome with a saran-type copolymer film or casing which is vacuumized after the product has been placed in it and then shrunk to a tight, clinging fit by immersing the product momentarily in water just below the boiling point.

Better appearance, retention of flavor, prolonged storage life, protection against weight loss and maintenance of color under fluorescent lights are the principal advantages claimed for

this type of package, which has also been widely used on chicken and other fowl. Because the plastic film can be attractively printed in several colors, product identity at the point of sale is also assured.

Scott Petersen & Co., whose products are sold entirely through independent grocers, is now using this type of package for all baked loaves, such as veal loaf, ham loaf, olive loaf and pepper loaf. Scott Petersen, Jr., president of the company, points out that with this type of packaging protection, the appetizing baked appearance so important to sales is preserved for a long period. Previously, the loaves were sold in a moisture-absorbent type of paper which afforded little protection and did not satisfactorily identify the products to

◀ **VACUMIZED FILM** packages for Scott Peterson & Co. show neat tight fit and good product identity possible with this packaging. In back row are veal loaf, baked ham and ham loaf. In front are shown minced ham, ring bologna, head cheese and pepper loaf. Printed labels will be sealed in open center of ring bologna. Printed bag will be used for head cheese. Prior to new packaging, latter product had to be stored in brine.

the consumer. Heat-sealed printed bands were also tested to preserve product identity, but moisture from the product caused them to become separated from the loaves.

The new film packages, which actually provide a tight-fitting "second skin" over the products, have met with enthusiastic acceptance by retail food-store operators as well as consumers. Each loaf package features the Scott Petersen name, the familiar "smorgasbord girl" trademark and a bright yellow panel, bordered in red, with the statement, "This all-meat loaf is guaranteed to have been baked in bakers ovens to bring out its fine flavor," in addition to a listing of the product's ingredients.

Since the adoption of this new-type package several months ago, the company's meat-loaf business has expanded considerably without any special promotion. The increase on veal loaves, formerly considered a "problem" product with relatively poor keeping quality, has been approximately 35%, made possible largely by the fact that the keeping quality of the loaves before slicing is almost indefinite. There has also been a large increase in output of pepper loaves, since keeping quality is no longer a factor and finished loaves can be held in the cooler or meat case for much longer periods without impairing flavor or appearance. The story is the same on Sylta, a Scandinavian specialty-type product containing choice veal and a variety of spices. Sylta is a particularly popular item during the holiday season, but prior to adoption of the new-type package it could not be made up in advance and held in inventory for any length of time in preparation for this heavy seasonal business. With the new package, operations can be scheduled on a more efficient basis.

Ring bologna, which comes in a consumer size, and other similar sausages gain particularly from this process.

ess. The thin gauge and transparency of the bag, plus the fact that it adheres firmly to all contours of the product after the shrinking operation, make it easy for the prospective customer to examine the product critically without actually touching the meat. The dry, non-greasy surface of the package also makes it easy to slice in the home without coming into contact with the exposed surface of the product.

Minced ham and certain other types of sausage in natural casings are also being placed in the shrink-fitted film wraps. Although heavily smoked products present no particular problem from the keeping standpoint, it is difficult to give them strong company identity at the point of sale. By applying a preprinted film casing or sealing in a printed label which cannot be separated from the product, identity may be carried all the way to the consumer. The plastic film also tends to seal in the smoked flavor of these products and reduces loss of color resulting from exposure to light.

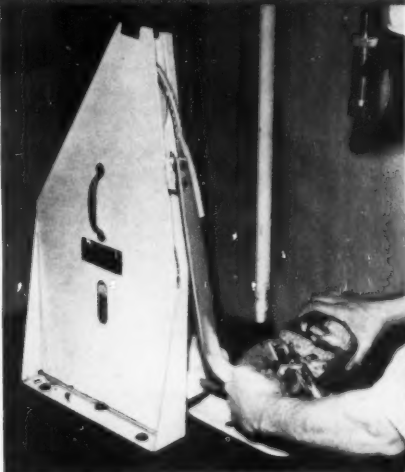
Head cheese, an unsmoked product of somewhat irregular shape, formerly presented two problems—unsatisfactory storage life and lack of brand identity. Before Scott Petersen & Co. began using the special film packages for this item, it was necessary to keep the product submerged in brine for proper inventory protection. This practice is no longer necessary and in the near future the company will receive shipment of the film wraps for this product carrying the company name and trademark printed directly on the bag.

Baked hams, complete with glazed-sugar coating and decorated with

APPLYING THE "SECOND SKIN"



A PREFABRICATED BAG with product inside is held over vacuum nozzle to exhaust air from bag and cause it to adhere tightly to the product.



ALUMINUM CLIP twisted around bag neck by foot-operated device seals the package. Clips are supplied on rolls of tape fed automatically. Excess of bag is cut off by drawing it past cutting edge at front of sealer.

MOMENTARY IMMERSION in water just below boiling point causes the oriented film to shrink to a tight fit, forming a protective "second skin" over the products and greatly improving keeping qualities.



cherries and a slice of pineapple, are a festive "special-occasion" item, but in the past retailers have been rather reluctant to handle them because of the tendency of the sugar coating to turn white and fade in storage. The experience of Scott Petersen & Co. indicates that the saran-type film casings eliminate this problem, resulting in a product which looks better, keeps better and is protected against handling. Result: greatly increased merchandising opportunities for baked hams. Smoked butts have proved to be another ideal product for this type of package.

Experimental packs being investigated by Scott Petersen & Co. indicate that the same packaging technique may be useful for such products as frankfurts, particularly for self-service merchandising. Due to the ability of the copolymer film to shrink tightly around the product, only a simple paperboard tray or separator is required to produce a sturdy, sealed, consumer package. Although studying the possibility of wiener packs in various sizes, the company has not actually marketed any of them up to the present time. From the cost standpoint, this type of package appears somewhat less attractive for wiener packs—particularly in the smaller sizes—than for some of the larger products cited above, most of which are held in the butcher's meat case so that consumer portions may be cut off at the time of purchase.

The film bags used by Scott Petersen & Co. in this new packaging program are fabricated from seamless extruded tubing which has been oriented or stretched to produce the desired shrinking action when immersed in hot water. The rounded bottom seam of the bags assures a closer conformity to the product without awkward protruding corners. In

the plant, meat loaves and other types of products are slid manually into the open mouth of the bags; stuffing horns or mandrels may be used for larger items if desired.

Once the product has been placed in the bag, the operator centers the printed area to provide maximum display value and identification. Next the open mouth of the bag is held firmly around a vacuum nozzle, where a 15-in. vacuum exhausts air from the package and causes it to draw in tightly against all product surfaces. The operator then rotates the product to twist the neck of the bag and, by means of a foot-operated pedal, applies an aluminum neck band which provides an airtight seal. The final step prior to shrinking of the package consists of cutting off the excess material beyond the neck seal; this is done on a guarded cutting edge located just below the vacuumizing nozzle.

Shrinking the bags to their final close fit on the products is accomplished by dipping the products for an instant in water just below the boiling point. At the Petersen plant, the customary practice is to place several loaves or other items in a wire basket and dip all of them at once. Immediately upon contacting the hot water, any wrinkles which may be present in the plastic covering disappear and the bag contracts to its final "skin-tight" fit. The entire sequence of packaging operations requires only a few seconds.

In its aggressive merchandising of luncheon meats and related items, Scott Petersen & Co. recently introduced another packaging innovation which has proved effective in boosting sales. This consists of what is believed to be the first foil label ever used on braunschweiger liver sausage and is used on the company's 8-oz. liver

sausage stuffed in a saran casing. Adopted after surveys by the company indicated that brand identity was being canceled out in mass displays by the conflicting colors used by various producers of this type product, the new foil label is printed in gold, red, white and blue. The product name, trademark background and scalloped border, in translucent red, stand out sharply against the glistening foil background, which also effectively sets off the company logotype in blue against white. Other features of the label include the listing of ingredients and a statement of its high protein and vitamin content.

The company points out that in addition to its traditional connotation of quality, the gold label also has much greater shopper visibility than the customary printed paper labels used on this type of product. Full-color ads in Chicago newspapers stress the fact that this is the only liver sausage "wrapped in gold."

For the holiday trade, the company has adopted a new folding-type gift carton brightly printed in red, yellow and blue. Distinctively Scandinavian in appearance, it features the smorgashord girl trade character and company logotype selected some time ago for the firm's complete line of packages.* This package is used during the Yuletide period for two types of gift assortments nested in shredded cellophane—one containing a canned ham, the other an assortment of several sausage items.

Another recent addition to the Scott Petersen line of packages is a lithographed metal container which holds 5 lbs. of country-style (unlinked) pork sausage. Again highlighting the smorgashord girl design, this attractive container, used in the meat case of the retail store, insures product identity at the point of sale and also protects the sausage against excessive handling and exposure.

COLORFUL FOIL LABEL for liver sausage believed to mark first use of foil for this type of product. New packages adopted by Scott Petersen include gift box (left) for canned hams and sausage assortments, and lithographed metal container for country-style sausage. Smorgashord girl trade character is featured on all the company's packages and wraps.

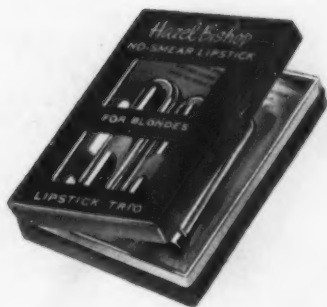


CREDITS: Cry-O-Rap film, using Dow saran, and Cryovac vacuumizing and sealing equipment, Deucey & Almy Chemical Co., Cambridge, Mass. Foil labels for liver sausage, John R. Scherer Co., Inc., 820 N. Cicero Ave., Chicago, using Reynolds aluminum foil. Folding cartons for holiday assortments, National Paper Box Mfg. Co., Philadelphia 33. Five-lb. containers for pork sausage, Cans, Inc., 3217 W. 47th Pl., Chicago 32. Basic package design, Norbert F. Schwarz, 28 E. Huron, Chicago.

* See "Smorgashord Girl," MODERN PACKAGING, Feb., 1950, p. 118.



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Package hygrometers

Two new instruments are used to measure moisture inside small, low-cost packages. By KENNETH C. COON*

The predominant factors affecting the preservation state of materials in storage are the existing temperature and moisture conditions. In determining the pertinent moisture condition for non-hygrosopic materials, it is obvious that a relative humidity measurement is sufficient. For moisture determination of hygrosopic materials in equilibrium with the surrounding atmosphere, either absolute moisture content or relative humidity may be measured.

A number of instrument types, such as the sling psychrometer, hair hygrometer, dew-point indicator and electric hygrometer are and have been available for determining relative humidity in physically large enclosures. The package hygrometer was primarily developed as an instrument to be used in determining moisture conditions existing within small, low-cost packages or enclosures where conventional instrumentation techniques are impractical.

Two types of package hygrometer, differing primarily in the type of sensing system, have been developed and tested. A description of each type and its relative merits will be presented and discussed.

General description

Though not limited to use in small spaces, the package hygrometer's

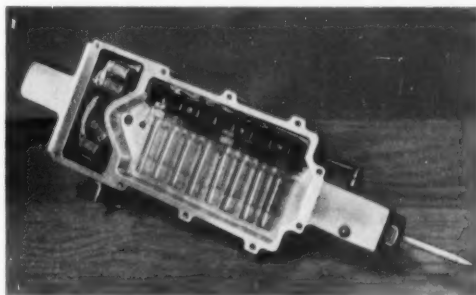
greatest usefulness is expected to be in the field of packaged perishables. A small, dual passage probe is used to pierce the container or package and project into the enclosed air space. A continuously flowing air sample is withdrawn from the package by a small centrifugal blower. The air sample passes from the probe passage into the measuring chamber, through the blower housing, and is returned to the package through a second probe passage. The sensing elements are mounted in the measuring chamber.

The determination of relative humidity involves the measurement of two variables: temperature and the quantity of water vapor present per unit volume. The package hygrometer utilizes a thermistor for obtaining the temperature measurement, while commercially available Dunmore-type humidity-sensing elements are used for obtaining the humidity measurement. Each Dunmore-type

element consists of a bifilar coil wound on a polystyrene form. The form provides a base for a lithium-chloride coating, which serves as a variable resistance conductor between the two halves of the bifilar winding. The resistance of the conductive lithium-chloride coating is a function of the quantity of water vapor present in the surrounding air and decreases as the quantity of water vapor per unit volume increases. The sensing elements are mounted in the probe unit as shown in Fig. 1.

The power supply and indicating equipment are included in a separate, portable case. The indicating equipment is used to measure the conductance of the humidity-sensing elements and, by proper switch positioning, of the thermistor. A current magnitude in micro-amperes, when referred to the proper calibration curve, is a measure of the humidity or temperature. The indicating equipment

1. PROBING instrument, showing eight Dunmore-type humidity-sensing elements consisting of bifilar coils wound on lithium-chloride-coated polystyrene forms.



* Associate Engineer, Engineering Research and Development Dept., General Mills, Inc., Minneapolis. This paper reprinted, by permission, from *Proceedings of the National Instrument Conference of the Instrument Society of America* (Sept., 1952), Cleveland, Ohio.



2. POWER SUPPLY and indicating equipment are housed in a separate, portable case. Current magnitude in micro-amperes, when referred to proper calibration curve, is measure of humidity or temperature.

may be operated from the AC line or from self-contained storage batteries. For battery operation a 24-volt vibrator supply is incorporated. The meter, sockets and all controls are mounted on the instrument panel. The indicating equipment and probe unit are illustrated in Fig. 2.

Multiple-element sensing

Since each humidity-sensing element is sensitive over only a narrow range of relative humidities, a total of eight elements is necessary to cover the entire humidity range. The eight elements are paralleled through a suitable resistance network, so that only a single conductance measurement is necessary.

Operating procedure for the instrument is straightforward. The cables are connected to their respective sockets and the instrument is warmed up and standardized. The package which is to be measured for humidity is pierced with the probe. The blower motor is then energized and allowed to run until the humidity meter indication stabilizes. If the measured relative humidity is only moderately different (20-30%) from the relative humidity of the air trapped within the enclosed probe passages from previous measurements, stabilization will have occurred within 2½ min. The temperature is obtained by switching the indicating circuit to temperature and referring the micro-ammeter scale reading to the thermistor calibration curve. After the measure-

ments have been completed and the probe has been withdrawn from the package, the small hole must be carefully sealed to maintain package integrity. The stabilized humidity reading is referred to the humidity calibration curve for the particular temperature. Interpolation between humidity-element temperature curves may be necessary. The relative humidity in per cent is obtained directly from the humidity-element calibration curves. The thermistor and humidity calibration curves are illustrated in Figs. 3 and 4.

With careful operation, the accuracy of the instrument is plus or minus 3% relative humidity. It has been calibrated for use over the temperature range of 40-100 deg. F. However, increased error will be introduced if the free air space within the package is less than 500 cc.

Single-element sensing

A probe unit using a single Dunmore-type element was designed and tested. The humidity element which was selected is sensitive to low relative humidities only. An electric heater was introduced in the air-inlet passage of the unit to the measuring chamber.

When relative humidities above the normal range of the single humidity element are encountered, the heater is energized, which raises the air-stream temperature. Since the absolute quantity of water vapor contained in the air stream is constant, raising the temperature effectively decreases the relative humidity. The air-stream temperature is gradually increased until the relative humidity

lies within the sensitivity range of the single humidity element.

This type of construction reduced the volume of air passages enclosed within the probe unit, making possible accurate measurements in enclosures as small as 250 cc. However, the humidity elements are temperature-sensitive as well as humidity-sensitive; and the humidity elements introduced excessive thermal lag into the system. Also, a high-humidity measurement could not be followed immediately by a low-humidity measurement, since sufficient heat remained in the probe unit to reduce the relative humidity below the sensitivity range of the single humidity element. The unit was satisfactory as a laboratory instrument, but was limited to semicontinuous use.

Calibration

To calibrate both instruments it was necessary to provide a wide range of constant relative humidities. The relative humidities above enclosed saturated salt solutions were accepted as standard. Published data are available (1), (2)† on the equilibrium relative humidities over various salt solutions. The use of supersaturated solutions must be avoided and extreme care exercised to maintain constant temperature. The package hygrometer was calibrated directly, using the salt solutions as absolute standard.

Maintenance

Routine maintenance should include no more than storage-battery (This article continued on page 177)

† Numbers in parentheses identify References appended.

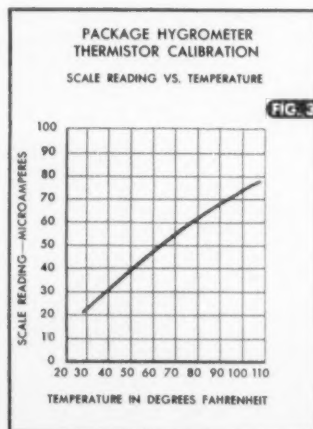


FIG. 3

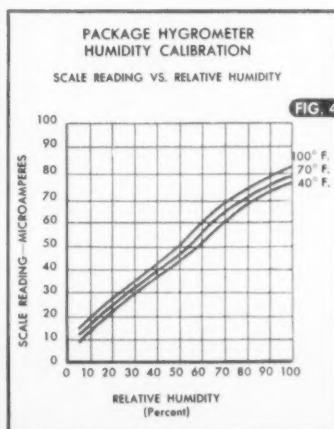


FIG. 4

Box-strength calculator

Combining research data, it provides answers
within seconds to corrugated and solid-fibre design problems.

By K. Q. KELLICUTT*, E. F. LANDT† and V. C. SETTERHOLM†

Billions of corrugated and solid fibreboard shipping containers were manufactured in the United States from the 10,885,000 tons of paperboard produced for packaging purposes in 1951.¹ Some of these containers were made on the basis of unrealistic rule-of-thumb methods; while for others, technical data resulting from the many container-evaluation studies that have been made and the experience of industry were used. To extend further the use of fibreboard and yet prevent waste and loss and damage in storage and shipment of goods, more studies on the fundamental principles of design are needed. Design criteria are needed so that fabrication of containers for specific uses can be based on the physical characteristics and strength properties of the paperboard sheets used in fabricating the boxboard. Because of these needs, an investigation of the basic properties of fibreboard and its component paperboard sheets was initiated at the Forest Products Laboratory.

The investigation has been in progress, in cooperation with the Quartermaster Food & Container Institute for the Armed Forces, and as a result some design criteria have been developed (1)².

Primarily, formulas were evolved in which the test values of either the ring-crush test or the strip-column test of paperboard sheets are used to predict the compressive strength of corrugated as well as solid fibreboard boxes. In addition, the criteria include means of determining the compressive strength of fibreboard boxes for var-

ious moisture-content values of the fibreboard and of determining the load that a fibreboard box could be expected to sustain for specific periods of time in storage (2).

The relationships between box strength and the properties of the component paperboard sheets were established and the initial design criteria were developed first for A- and B-flute corrugated fibreboard boxes made from corrugated fibreboard fabricated on the Laboratory's corrugator; the criteria then were extended to include C-flute boxes. Next, the basic relationships and the basis for design criteria were established for solid fibreboard boxes.

To simplify the use of the formulas that were developed for predicting the compressive strength of boxes, for determining the compressive strength at various moisture-content values of the fibreboard and for determining safe stacking loads for boxes in storage, alignment charts were constructed of each of the relationships involved (1).

Further simplification of the design criteria resulted in the development of the Forest Products Laboratory Box Strength Calculator. The calculator combines the information contained in the several alignment charts and makes possible the solution to various design problems after simple manipulations of the calculator. The answers can be obtained in a matter of only a few seconds.

This article discusses the relationships upon which the calculator is based and illustrates its use as a tool in the solution of design problems involving either corrugated or solid fibreboard boxes.

Tests and procedures

Several forms of material and test methods were used in the development of design criteria (1, 2). Only

the ring-crush test and strip-column test of the component paperboard sheets and the compression test of the finished fibreboard box will be discussed in this article, however.

Ring-crush test. The ring-crush test consisted of testing $\frac{1}{2}$ -by-6-in. strips of paperboard formed into a ring in a metal specimen holder. The strips were supported on the inner surface by one of several removable islands, such that a column of paperboard $\frac{1}{2}$ in. high extended above the holder; the selection of appropriate islands depended upon the thickness of the paperboard. The strips thus supported were crushed in a testing machine (3). The test yielded a single value, that of maximum load.

Specimens were so cut from the sample sheets that the crushing load could be applied parallel to either the "with-machine" or "across-machine" direction of the paperboard. Both linerboards and corrugating mediums used in the construction of the corrugated fibreboards were tested in this procedure.

Strip-column test. The strip-column test was essentially used for tests of the components of the solid fibreboard. The test specimens were of the same size and cut by the specimen cutter used for preparation of the ring-crush test specimens. The strips were held straight between two clamp supports so as to provide a column $\frac{1}{2}$ in. high. As in the ring-crush test, only a single value of maximum load was obtained when the column was crushed in a testing machine.

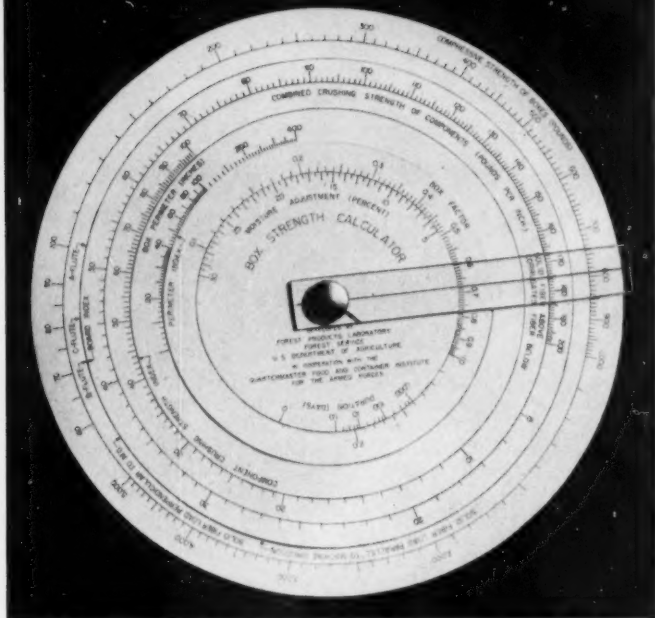
Compression tests of boxes. The compression tests of boxes were made in a universal testing machine that had a mechanism for making an autographic load-compression curve of each test that was made.

Conditioning of specimens prior to tests. The specimens for the ring-crush and strip-column tests were condi-

*Engineer and †Technologists, Forest Products Laboratory, U. S. Department of Agriculture, Madison, Wis. The views and conclusions contained in this report are those of the authors; they are not to be construed as necessarily reflecting the views or endorsement of the Department of Defense.

¹Fibre Containers, Vol. 37, No. 8, 1952.

²Numbers in parentheses identify References appended.



1. BOX-STRENGTH CALCULATOR consists of hairline indicator and five circular disks with various scales: Disk No. 1 (smallest disk)—moisture-adjustment scale and duration-of-load scale. Disk No. 2—box-factor scale and box-perimeter scale. Disk No. 3—component crushing-strength index and box-perimeter scale. Disk No. 4—scale for combined crushing strength of components (values above line for solid-fibre boxes; values below line for corrugated) and board index. Disk No. 5—index settings for solid-fibre boxes in which the applied load is parallel to the machine direction; solid-fibre boxes in which the applied load is perpendicular to the machine direction; B-flute, C-flute and A-flute corrugated boxes, and the scale for compressive strength of boxes.

tioned before test in an atmosphere maintained at 75 deg. F., 64% relative humidity. The boxes were conditioned in several different atmospheres, so that the relationship of compressive strength of the box and moisture content of the fibreboard could be established.

Discussion of results

One of the main objectives of the basic investigation of fibreboard was to develop a method of expressing the crushing strength of a fibreboard box, fabricated from either corrugated or solid fibreboard, using the test values from a simple test of the component paperboard sheets.

In the development of this method, the tube, which is primarily a box without top or bottom, was used as the intermediate link between tests of the components and of the box. Also, the tube represents the ultimate compressive strength that can be obtained from any given combination of component materials and through its use, the upper limits of compressive

strength for a box could be established.

Development of a design formula for corrugated fibreboard boxes. After evaluating the simple ring-crush test and the strip-column test by means of a more precise test, the modified ring-crush test (3), it appeared that the test values from either of the tests could be used in an appropriate formula for calculating the compressive strength of fibreboard tubes and boxes.

The Forest Products Laboratory has applied the thin-plate theory of mechanics to design of panels of plywood (4, 5, 6, 7). Since fibreboard and plywood are both non-isotropic materials, it was believed that the design information for plywood could be used as a guide in evolving a formula for fibreboard. Several tentative formulas were developed and each in turn was modified in the interest of simplification.

The several tentative formulas resulted in the following formula for calculating the top-to-bottom compressive strength of the finished fibre-

board box with A-, B- or C-flutes vertical in side walls:

$$P = P_x \left(\left(\frac{a_{k2}^2}{Z} \right)^{\frac{1}{3}} + J \right)$$

in which

P = total compressive strength of box in pounds

P_x = composite ring-crush load of built-up board (pounds per inch)

$(P_{r1}$ single face + P_{r1} double back + $a P_{rv}$)

P_{r1} = ring-crush load in pounds per in. of a $\frac{1}{2}$ -by-6-in. strip of liner either in the with- or across-machine direction, dependent upon P

P_{rv} = ring-crush load in pounds per inch of a $\frac{1}{2}$ -by-6 in. strip of corrugating medium in the across-machine direction

a = ratio of length of corrugating medium when flat to its length when corrugated (A-flute = 1.523, B-flute = 1.361, C-flute = 1.477)

a_{k2} = either 8.36, 5.00, or 6.10 for A-, B- or C-flute, respectively

Z = perimeter of box in inches
 J = box factor for the appropriate kind of fibreboard

A-flute = 0.59

B-flute = 0.68

C-flute = 0.68

Solid = 0.70

To simplify the use of the formula, alignment charts were constructed for A-, B- and C-flute boxes (1) as well as for boxes made of solid fibreboard.

Development of a design formula for solid fibreboard boxes. The results of tests on solid fibreboard tubes and components indicated that the same method used for expressing compressive strength of corrugated boxes could be used, with slight modification, for solid fibreboard boxes. Essentially, the modification consisted of including a factor representing the grain direction of the fibreboard in respect to the applied load and a box factor for solid fibreboard in the formula for P , the total compressive strength, and using values from the strip-column test rather than the ring-crush test for determination of the P_x quantities.

As with corrugated boxes, an alignment chart was constructed to simplify the calculations of the compressive strength of solid fibreboard boxes.

Development of duration-of-load

information for fibreboard boxes. To determine the information deemed necessary for establishing the load limits for specific periods of storage, long-time loading tests were made of several kinds of corrugated boxes in several controlled atmospheres (2). From these tests the relationship between the compressive strength of a box and the amount of dead load, corresponding to the stacking loads in a warehouse, that a box could support for specific periods of time was established. For example, a dead load that approached the maximum compressive strength of a box caused failure usually within minutes, but dead loads that were equivalent to about 60% of the compressive strength of the box extended the time to about 30 days. The relationship between compressive strength and duration of load can be expressed by a curve that is based on the ratio of the dead load to the static compressive strength of the box. This relationship applies for all boxes, both corrugated and solid fibreboard, and for all moisture conditions of the fibreboard.

Relation of moisture content of fibreboard to compressive strength. In determining the relationship of duration of load and compressive strength of the box, several controlled atmospheres were employed. From this investigation, a relationship between moisture content of the fibreboard and compressive strength of the box was found (2). The relationship became apparent from curves for various lots of boxes in which the compressive strength of the box was plotted against moisture content. Examination of the curves showed that they all had about the same slope and for practical purposes it appeared that a curve representing an average slope could be used to represent the relationship. Hence, if the compressive strength of a box at one moisture content is known, the compressive strength of the box can be interpreted at other moisture contents of the fibreboard.

A formula was derived for expressing the relationship between moisture content and box strength, and to simplify its use, an alinement chart was constructed (1).

Development of calculator

In the basic investigation of fibreboard and its component parts, for each relationship that was established an alinement chart was constructed to

facilitate its use. In the development of each relationship, however, it was found that all phases of the investigation were related. For example, after the relationship between the compressive strength of the component paperboard sheets and the compressive strength of the box was established, duration of load was found to be directly related to compressive strength. Both the duration of load and the compressive strength were in turn related to the moisture content of the fibreboard. Hence, it became apparent that if the several alinement charts could be consolidated a useful tool would result—one that could be used by the laboratory technician in quality-control work, by the packaging engineer in design applications and by the fibreboard box salesman, and that could be used for calculating the requirements of specifications for all fibreboard boxes.

As a result of the consolidation of the alinement charts, the tool was developed and was designated as a Box Strength Calculator. The calculator is shown in Fig. 1 and can be used for the following: (1) To calculate the top-to-bottom compressive strength of an A-, B- or C-flute corrugated fibreboard box or a solid fibreboard box having a perimeter up to 400 in.; (2) to calculate the dead load that a box can be expected to sustain for a specific period of time in storage; (3) to interpret the compressive strength of a box at one moisture content of the fibreboard in terms of other moisture contents; and (4) to determine what strength properties are required of the component sheets in order to provide a box that meets specific use requirements.

The use of the calculator can best be explained by the solution of a hypothetical example.

Solution of a problem. For purposes of illustrating the use of the calculator, it is assumed that a regular slotted B-flute box 12 by 12 in. is desired for a specific container in which the gross load is to be 65 lbs. The commodity for which the box is intended is being manufactured during an off-season period and it will be stored in a warehouse until the appropriate time to market it. The warehouse facilities are limited and it is expected that the length of storage will be about 100 days. Boxes will be stacked five high during the period and it is expected that the moisture content of the fibreboard during this period

will approach but not exceed 14.0%.

The manufacturer desires to provide as good a box as will be needed to meet the requirements, but he knows that over-design is a waste of materials and wants to avoid this situation. He also knows the boxes will be handled several times before they reach the storage warehouse and each handling will result in some reduction of compressive strength. For this reason, he is going to allow a safety factor of 20%.

The problem therefore is to select the proper combination of paperboard materials from which to make the board for the box. This selection can be made simply and in a matter of seconds by using the box-strength calculator to determine the combined ring-crush strength of the components for the moisture content of 9.5% (laboratory test conditions).

The problem is solved as follows:

(1) Aline the hairline of the indicator with 260 lbs. (load on bottom box) on the outer scale (compressive strength of boxes).

(2) Orient 100 days of the duration scale (small top disk) with the hairline of the indicator.

(3) With the small and large disks fixed in position, move the hairline to zero on the duration scale. With the indicator in this position, it may be seen from the outer scale that a box having a compressive strength of 480 lbs. will be needed. This strength is needed at a moisture content of 14.0% if the box is to support 260 lbs. for 100 days or less. It is desired, however, to know the corresponding compressive strength of the box at 9.5% moisture content (laboratory test conditions).

(4) With the hairline indicator set at 480 lbs. on the outer scale, aline the 14.0% figure of the moisture-adjustment scale with the hairline indicator. Hold the smallest and largest disks in a fixed position and turn the indicator to coincide with 9.5% on the moisture-adjustment scale. In this position 660+ lbs. is read on the outer scale (compressive strength of box). Hence, the box desired has a compressive strength of 480 lbs. in the warehouse conditions with an expected moisture content of 14.0% and 660+ lbs. in the laboratory where 9.5% moisture content is expected.

Since a safety factor of 20% was allowed, the compressive strength required becomes 792 lbs.

(This article continued on page 178)

Questions & Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Air in frozen-fruit can liners

QUESTION: We pack frozen fruits in large-size units, using lined metal cans of the slip-top type. The liner is a heat-sealed plastic bag. Is there a method whereby the bag within the can could be evacuated of air or oxygen to reduce fruit oxidation?

ANSWER: The two possible answers to your problem are (1) the elimination of excessive air by pulling the bag into tight conformation with the contents of the can. This can be accomplished quickly by means of an inexpensive blower. The other method (2) would be to evacuate the bag to a high degree and then to seal it or to add an inert gas and then seal. This operation would require considerable equipment and would be higher in labor cost than the first method, but it would have the advantage of eliminating practically all the oxygen. It is suggested that you contact several companies which are handling similar containers of a vacuumized or gas-filled type. Their experience and equipment could help you in deciding which process would be most satisfactory for your needs. You must keep in mind, however, that it would do no good to eliminate most of the oxygen if the liner you are using is poorly sealed or will transmit oxygen through its walls. There are many types of plastic film that have a high oxygen permeability and they should not be used in any process involving vacuumization or an inert gas.

Opaque aluminum coating on paper

QUESTION: We are interested in manufacturing an aluminum coating on various types of paper bases. We wish to use aluminum pigments to achieve a coating depth sufficient to prevent the transmission of light. We are wondering whether we should attempt to do this by a printing press

or some other type of coating application.

ANSWER: It would be possible to apply an aluminum-pigmented ink on a rotogravure press to achieve sufficient density so that it would be opaque to light and have a good surface finish. Such results could be obtained with a gravure press and on letterpresses using special inks. However, in view of the weight of coating which you will require to achieve complete opacity, it is suggested that you consider coating applications in which the aluminum pigment is dispersed in casein solutions or solutions of synthetic resins. Coating equipment for handling such solutions is in use commercially and would be the most economical way to apply this weight of coating with the smoothness desired. The exact binder depends on your use for the coated paper.

Transparent bags for cooler pads

QUESTION: Our problem is to obtain a transparent bag or envelope of some plastic material for our evaporative cooler pads. These pads are packaged in various sets of different numbers of pads and a large number of sizes up to 36 by 42 in. We would also like to know how to seal whatever plastic material you suggest.

ANSWER: It would appear that your product will require a plastic envelope which is very tough. Either polyethylene, Pliofilm or vinyl film could be very suitable for this application since they are available from many sources, in bags and envelopes of various sizes and styles.

These envelopes could be heat sealed, durable enough to carry different numbers and sizes of pads and protect them during handling, packing, storage, etc. You could try the minimum thickness of polyethylene

film, which is approximately 1½ mils and you might also try some heavier gauges, particularly for your larger pads. All of the films can be printed by many suppliers and are sufficiently transparent for your use. The envelopes or bags can be heat sealed by practically all commercial heat sealers. Your problem is to obtain a sealer sufficiently large and be sure that the manufacturer understands it is to be used for plastic films.

Packaging yarn hanks

QUESTION: We are interested in automatic machine means of wrapping hanks of knitting yarn of various sizes. We don't wish to compress the yarn too much and there will be different sizes and numbers of hanks of yarn in the finished packaging.

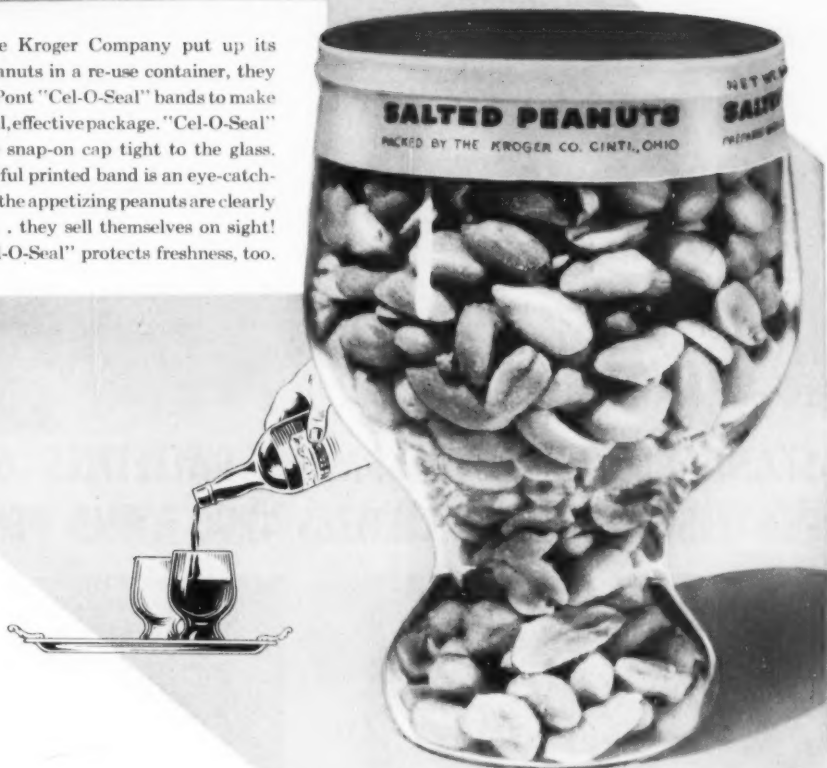
ANSWER: It is not feasible to use a wrapping operation for the packaging of hanks of yarn in various sizes and numbers. In this case, special equipment would have to be built because of the sizes of the packages you prepare and the extreme softness of the product. It is suggested that you consider the use of pre-formed bags and suitable filling fixtures for this purpose. The bags can be one or more plies of kraft paper of pasted construction. Such bags are available in many different sizes and types and are produced on automatic bag-making machines. They can be set up and formed by a simple mechanical means, the yarn can be assembled in a loading tube or form, and then the whole assembly pushed into the bag. The bag can be closed by tape or stapling. This method will allow you to control the compression you wish for your product and even though the operations are manual it would be a rapid and economical procedure. The mechanical devices are simple and easy to build and can be made up for a variety of bag sizes.

CEL-O-SEAL is a label...

REG. U.S. PAT. OFF.

holds cover tight...guards freshness

When the Kroger Company put up its salted peanuts in a re-use container, they used Du Pont "Cel-O-Seal" bands to make a practical, effective package. "Cel-O-Seal" holds the snap-on cap tight to the glass. The colorful printed band is an eye-catching label, the appetizing peanuts are clearly visible . . . they sell themselves on sight! And "Cel-O-Seal" protects freshness, too.



"Cel-O-Seal" can help you with your packaging . . . use it to insure a tight closure . . . to attach a leaflet . . . to get across your sales message or slogan in eye-catching color.

FREE PACKAGING SERVICE:

See what "Cel-O-Seal" does to give you a better *selling* package! Send us a labeled dummy package. Our packaging experts will band it, return it for your inspection. No obligation, of course. Write to: "Cel-O-Seal" Section, E. I. du Pont de Nemours & Co. (Inc.) 9529-A Nemours Bldg., Wilmington 98, Delaware.

"Cel-O-Seal" cellulose bands are also sold by Armstrong Cork Co., Lancaster, Penna., and I. F. Schnier Co., San Francisco, Calif.

DU PONT CEL-O-SEAL BANDS

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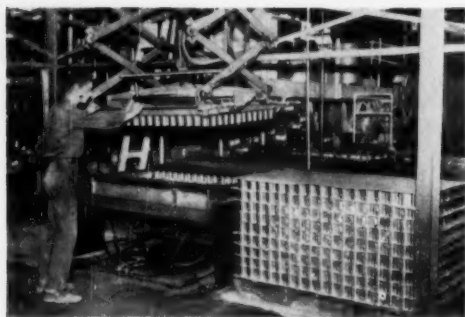
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY



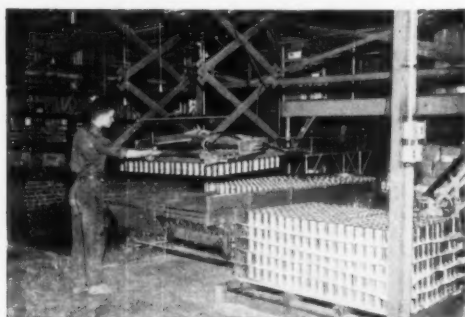
STANDARD-KNAPP bright can palletizing and de-palletizing unit in large U. S. food canning plant. Cans are palletized at high speed after cooling by equipment at right and de-palletized after storage for labeling on unit at left.

LEADING CANNER MECHANIZES BRIGHT CAN PALLETIZING

STANDARD-KNAPP EQUIPMENT PALLETIZES 600 CANS PER MINUTE...DE-PALLETIZES 1200 CANS PER MINUTE



PALLETIZING suction head, equipped with vacuum cups, picks up full layer of cans. Layer is then gently deposited on pallet. Can tiers are separated by kraft paper sheets which bind load together and limit "leaker" spoilage. Operator controls lifting and releasing by means of push buttons.



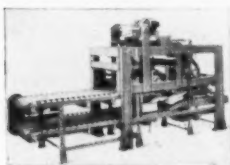
DE-PALLETIZING unit's vacuum cups remove layer of cans from pallet. Operator swings load gently onto a Standard-Knapp unscrambler, which delivers cans in single file to a booster for conveying to a labeler.

Compare your present bright can handling method with the Standard-Knapp system: One operator palletizes 600 cans per minute, easily, without laborious effort. A second operator de-palletizes them for labeling at a rate of 1200 cans per minute, again working

easily. You get more cans in a given space, because the kraft liners take much less room than wooden separators. Leaker damage is not only strictly confined, but leakers can be readily detected and removed during de-palletizing.

Right Down The Line...STANDARDIZE With STANDARD-KNAPP EQUIPMENT

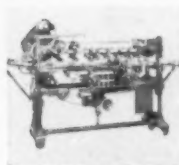
FOR CAN LINES—STANDARD-KNAPP PROVIDES



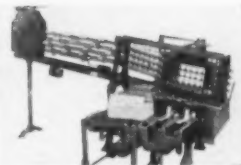
UNLOADERS



UNSCRAMBLERS



LABELERS



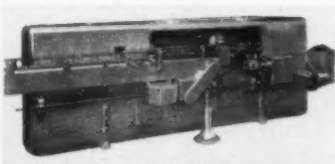
PACKERS

also: CONVERGERS, PALLETIZERS and DE-PALLETIZERS, BOOSTERS, CARTON MAKE-UP UNITS, CASE GLUERS and SEALERS

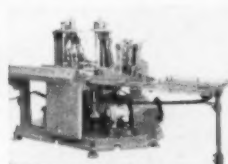
FOR GLASS LINES—STANDARD-KNAPP PROVIDES



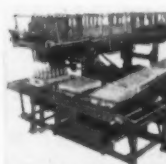
UNLOADERS



RINSERS



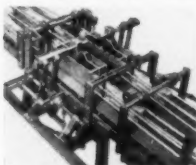
LABELERS



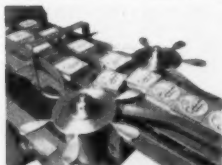
PACKERS

also: CONVERGERS, UNSCRAMBLERS, CASE GLUERS and SEALERS, CARTON MAKE-UP UNITS, WOODEN CASE CLEANERS

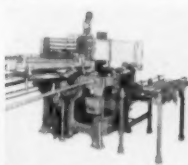
FOR CARTON & BAG LINES—STANDARD-KNAPP PROVIDES



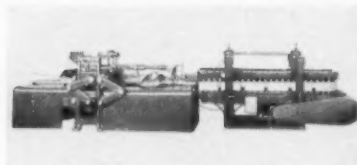
COLLECTORS



BALANCED LINE DIVIDERS



PACKERS



CASE GLUERS AND SEALERS

FOR ALL LINES—STANDARD-KNAPP PROVIDES

know-how on all phases of your packaging operations . . . expert guidance in planning machine layout . . . localized engineering, sales and service.

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write for catalogs describing machines for your industry to Dept. G, Standard-Knapp, division of Emhart Mfg. Co., Portland, Conn.

Only the best is good enough

STANDARD-KNAPP

DIVISION OF EMHART MFG. CO.

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SALES, ENGINEERING,
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ATLANTA, BOSTON, CHICAGO, CLEVELAND,
HOUSTON, LOS ANGELES, NEW YORK CITY,
SAN FRANCISCO, SEATTLE, ST. LOUIS

Equipment and materials

POLYETHYLENE-COATED CELLOPHANE

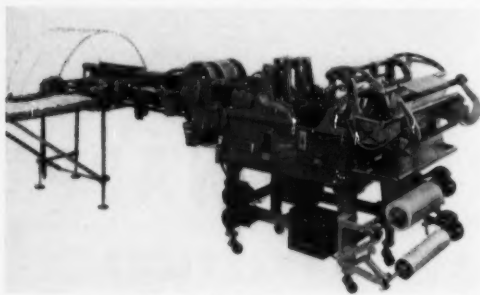
to be marketed under the name Polycel has been announced by the H. P. Smith Paper Co., 5001 W. 66 St., Chicago 38. Polycel is claimed to offer the gloss, printing properties, ease of sealing, tensile strength and gasproofness of cellophane and almost all of that material's transparency and clarity, plus the low-temperature resistance, aging qualities and high seal and tearing strengths of polyethylene. Most shortcomings of either material are matched by an advantage of the other in the composite, the company says. Polycel is being made initially in two grades: Polycel A is a moistureproof-coated 300 cellophane on one side and coated on the other side with 1-mil polyethylene; Polycel P is plain cellophane coated on one side with 1-mil polyethylene. Polycel A is intended for applications where it will encounter high or low extremes of humidity or temperature, freezing or contact with water or other liquids. Polycel P is intended only for packaging of relatively dry products where the package will not be exposed to extremes of temperature or humidity. The company says Polycel A should work well in most face-to-face (polyethylene-to polyethylene) heat-sealing applications, including use of automatic bag making-filling-sealing units with a liquid product fill. For face-to-back seals in bag making, tests indicate desirability of using an adhesive for a permanent bond. Adhesive LJ-468 from H. B. Fuller Co., 1733 W. Hubbard St., Chicago, has been successfully used for this purpose, it is reported.

Current production, largely for test and trial work by interested users, is in 36-in. widths, but all widths from 36 to 45 in. in 1-in. intervals will probably be available in several months. Small trial rolls of Polycel A in widths of 6, 12, 18, 24 and 36 in., 100 yds. long, are currently offered at 500-lb. prices. Tentative 500-lb. prices are: Polycel A, \$1.25 per lb. (yield 11,650 sq. in. per lb.); Polycel P \$1.15 per lb. (yield 12,350 sq. in. per lb.).

The company says only a few of the many potential end uses have been tested as yet and recommends Polycel for consideration not only where its transparency is needed, but in applications such as bag, carton and crate liners.

A NEW STACKER-COUNTER ATTACHMENT

has been designed for its polyethylene bag-making machines by Simplex Packaging Machinery, Inc., 387 40th St., Oakland 9, Calif. The attachment, which makes it possible for one operator

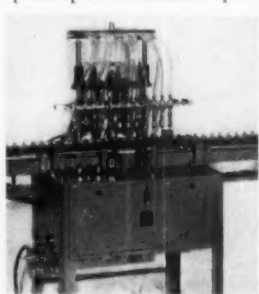


to supervise several bag-making machines, consists of a movable stacker and a conveyor belt on which groups of 10, 25 or 50 polyethylene bags are sorted into stacks. There is also a metering device to keep accurate count of the number of individual bags

and stacks. The accompanying illustration shows a Simplex automatic high-speed polyethylene bag maker with the new attachment appearing at the left.

HIGH-SPEED STRAIGHT-LINE FILLERS

made by Perl Machine Mfg. Co., 68 Jay St., Brooklyn 1, N. Y., are designed to fill cans and bottles in a wide range of sizes at speeds up to 180 containers per min. The new fully automatic

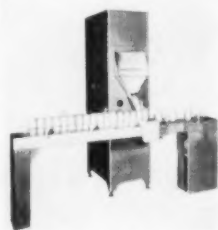


Perl machines make use of the possibilities of straight-line, multiple-spout design in a unit which can handle a range of container sizes and styles without the extra expense of change parts for the container-handling mechanism. Change-over labor and time are also reduced considerably, the company says. Because containers come to a complete standstill for the filling operation, risk of damage to filling spouts and con-

tainers is eliminated and the lack of motion during filling is also said to minimize foaming tendencies. There are four sizes of the new Perl straight-line automatic filler: (1) for 1/2- to 12-oz. containers; (2) for 2 oz. to gallons; (3) for pints to 2 gal.; (4) for bottles or cans from gallon to 5-gal. sizes.

A FULLY ENCLOSED NET WEIGHER

that provides quick change-over over a broad product and weight range has been introduced by Frazier & Son, Belleville, N. J. The new Whiz-Packer is made semi-automatic for all types of container filling, including bags, and fully automatic for all types of flat-bottom containers. As a complete filling-conveying unit, it handles jars, cartons and cans of any size and shape. Containers are fed to the incoming side of the conveyor, stopped and held under the filling spout by control fingers. When filled, they are released to the outgoing side of the conveyor. The conveyor is electrically synchronized with the weighing machine. If a container is not in filling position, filling mechanism automatically stops. The standard conveyor is supplied 8 ft. long and 33 in. high.



HIGH-GLOSS FLEXOGRAPHIC CELLOPHANE INK

has been introduced by Bensing Bros. & Deemey, 3301 Hunting Park Ave., Philadelphia 29. The new ink, called Excellobrite, prints with a glossy finish designed to match the gloss of the film itself. It is offered for use on all makes of moistureproof heat-sealing, moistureproof anchor-coated and semi-moistureproof anchor-coated cellophane whenever gloss is desired, but reverse printing is impractical. The company recommends Excellobrite for overprint as well as first down color, but says that when used only for first down color it boosts the gloss of the company's regular Excellopake inks overprinted on it. A full

Makes good packaging better...

Looking for superb transparency? Then take a tip from the man in the picture . . . look at Kodapak Sheet. See for yourself why so many national product manufacturers specify it; why many package designers and manufacturers use nothing else. But clear-as-crystal transparency

that displays as it protects is only part of the story. Let a representative tell you *all* about Kodapak Sheet . . . its matchless uniformity, stability, durability . . . the great variety of types available. Or, if you wish, write . . .

Cellulose Products Division, Eastman Kodak Company, Rochester 4, N. Y.

Sales offices: New York, Chicago, Dallas. Sales representatives: Cleveland, Philadelphia, Providence. Distributors: San Francisco, Los Angeles, Portland, Seattle (Wilson & Geo. Meyer & Co.), Toronto, Montreal (Paper Sales, Ltd.).

Kodapak Sheet

"Kodapak" is a trade-mark.



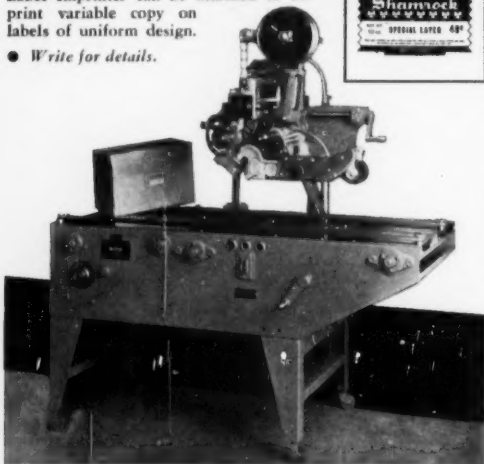
Now...the new "OLIVER" Package-Top Labeler

**Heat-seals 40
to 80 diecut labels
a minute to
top side of package**



- This new roll-type labeler is successfully used (1) as a separate unit, (2) with machines not equipped with labeling units, and (3) in a conveyORIZED hook-up.
- A single diecut label (from roll) is heat-sealed by the Package-Top Labeler to the top side of a cardboard container, or any package having a fairly uniform, firm surface. Label can also be applied to cellophane, glassine, wax or kraft paper overwrap.
- It applies labels on 40 to 80 packages a minute. The packages are automatically spaced and synchronized with the labeling mechanism. Pressure and heat, applied directly to label, assure a perfect, strong seal.
- Both packages and labels are handled in a wide range of sizes. An "Oliver" Label Imprinter can be attached to imprint variable copy on labels of uniform design.
- Write for details.

Imprint labels for immediate needs to eliminate waste. A "blank" label can be imprinted with essential information. Imprint items changeable quickly. Investigate today!



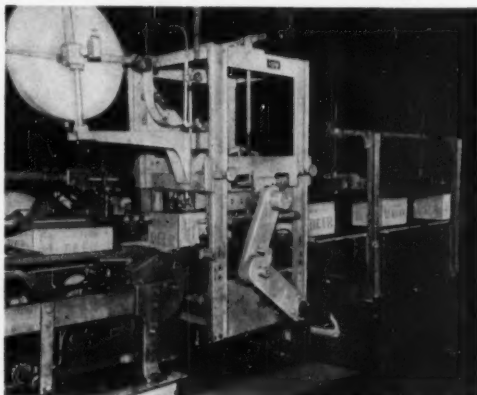
OLIVER MACHINERY COMPANY
GRAND RAPIDS 2, MICHIGAN, U.S.A.

Equipment and materials

range of standard colors is now available, formulated for regular speeds on any type of flexographic press. The new ink is said not to block even at 130 deg. F. and 90% relative humidity. It is fast drying, 100% pigmented, thin bodied and will not bleed in film plasticizers. Up to 25% or more mileage per pound of ink is claimed. The company warns that this ink should be used only on the coated types of cellophane listed and not on plain transparent or on specialty films of the saran-coated type.

AUTOMATIC TAPE-SEALING

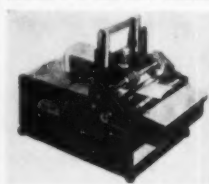
of top-flap closures on corrugated cartons is now possible with the automatic tape sealer made by General Corrugated Machinery Co., Inc., 141 W. Central Blvd., Palisades Park, N. J. The unit (see illustration) straddles the carton-closing line be-



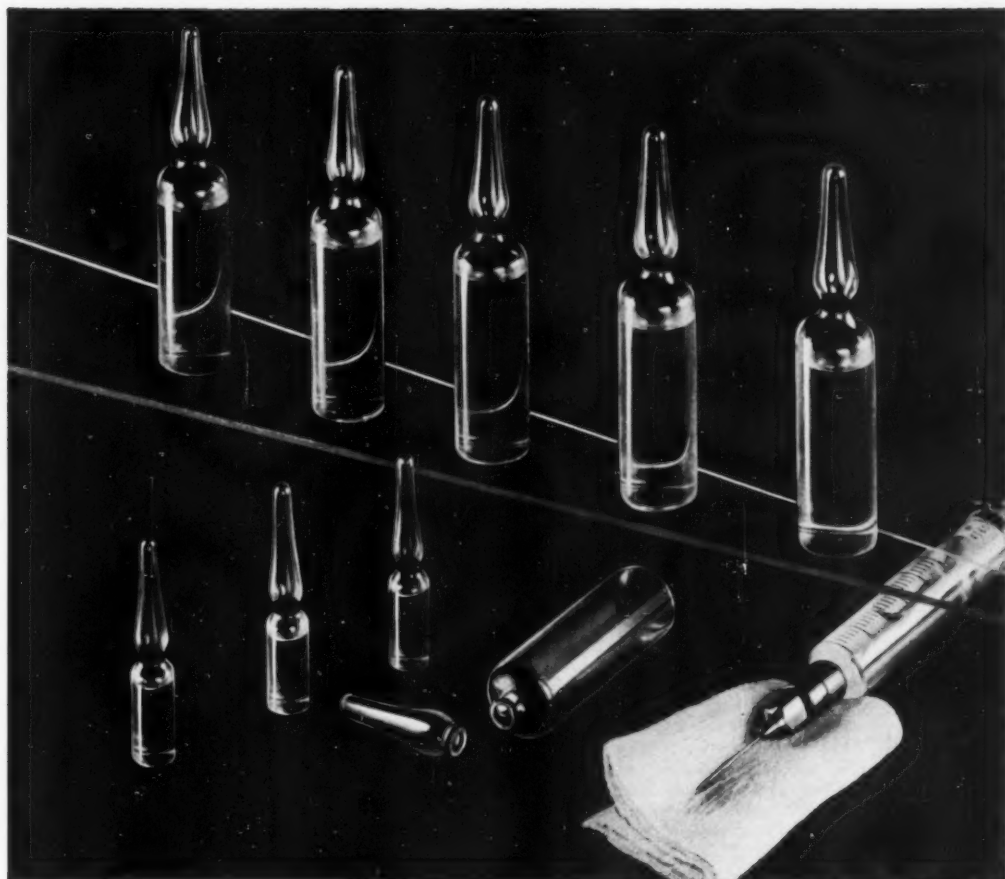
tween the top-flap gluer and the pressure unit. As used by breweries, the company says, the taper is left inoperative on single-use cartons, but for re-use and return cartons the flaps are left unglued and the taper goes into operation to make a closure that can be opened without damage to the container. One user is said to employ the taper in conjunction with flap gluing to secure a dustproof closure. For making the manufacturer's joint in corrugated cartons, the company reports development of another machine on which either glued or taped corner lap joints may be fastened. The machine has a "closed-system" gluing unit which has no glue rolls. Elimination of roll preparation and clean-up makes it possible for the new combination gluer-taper to change from one method to the other in only three minutes, the company says.

LABELER THAT DOUBLES AS A SHEET DISPENSER

by reason of improvements in the feed-finger assembly has been announced by the Nelson Label Machine Corp., 28 Argyle Pl., North Arlington, N. J. The improved Nelson Auto Feed Labeler Model F-5 can now handle instruction sheets, parts lists, etc.,



as fine as 0.002-in. thick. The feed finger can be micrometrically adjusted so that only single sheets will be fed through regardless of thickness. The machine can be incorporated into production lines and the feeding coordinated by means of an electric eye. Basically a semi-automatic labeler, the unit



GRIP . . . BEND . . . SNAP—
Neutraglas Color-Break Ampuls are ready to use!

Now - give your product perfect protection in new **KIMBLE COLOR-BREAK AMPULS**

Here's the package you've always wanted—can't be tampered with . . . keeps your product pure and unadulterated . . . and, now, *easy to open*.

Neutraglas Color-Break* Ampuls are inert to their contents. Solvents, chemicals, sterilizing agents—even distilled water—find these ampuls persistently

indifferent to chemical action.

There's no filing . . . no scoring . . . no sawing! Simply hold one of these new ampuls in your hands . . . bend it, and the stem snaps off! Presto, it's ready for use. Think of the convenience you can offer the users of your products.

The secret of this revolutionary

Kimble development—the result of nine years' work—is in the patented blue color band around the neck of the ampul. This color-break feature is the greatest improvement in ampuls since the development of Neutraglas containers. *Decide today to modernize your ampul package.* *Owens-Illinois Trade Mark



KIMBLE GLASS COMPANY

Toledo 1, Ohio—Subsidiary of Owens-Illinois Glass Company

General Mills Announces Lower Prices On Improved Polyamide Resins

Full Line Stabilized for Improved Color and Heat Stability

The price of General Mills' Polyamide Resins has been reduced to a new low on purchases over 8,000 pounds. Current prices have been cut from 55¢ to 48¢ a pound in quantities of 8,000 to 20,000 pounds, and from 50¢ to 46¢ on 20,000 to 40,000 pounds.

Color stability has been improved. Also, Polyamide Resins are now more stable when exposed to heat or oxygen.

Polyamide Resins are used as coatings on paper label stock, bag seals, laminated paper, foils, glassines, and moisture-proof cellophane. They impart heat sealing properties and resistance to water, water vapor, grease, solvents and chemicals. Three basic types are available, Polyamide Resins Nos. 93, 94 and 95. All three may be coated as hot melts or solvent solutions.



PRICES CUT UP TO 7¢ LB. ON

POLYAMIDE RESINS!

Now! Get Polyamide Resins for less in quantities over 8,000 pounds. As much as 7 cents a pound less!

Because sealing temperature is low (starting at 176°F.) compared to other heat sealing coatings (typical polyvinyl acetate and ethyl cellulose formulations seal starting at 212°F.) Polyamide Resins reduce danger of damaging the paper.

Polyamide Resins are soluble in many common solvents such as n-butanol, and blends of 70% toluene plus 30% isopropanol, but are insoluble in such solvents as acetone and methanol.

The flexibility of Polyamide Resin gives effective moisture and grease protection on creased as well as flat surfaces.

Polyamide Resin is an excellent overprint coating, too. On labels, a Polyamide Resin film only half the thickness of polystyrene, a common overprint varnish, gives equal gloss.

Important Physical Characteristics:

- Low Melting Point
- High Gloss
- Heat Sealability
- Grease and Oil Resistance
- Non-Blocking
- Scuff Resistance
- Water and water vapor Resistance

TO ORDER

Polyamide Resins, or for additional data, address:

General Mills, Inc.

Chemical Division, Minneapolis 1, Minnesota

Send Name, Firm Name and Address

PHONE: ATLantic 1144

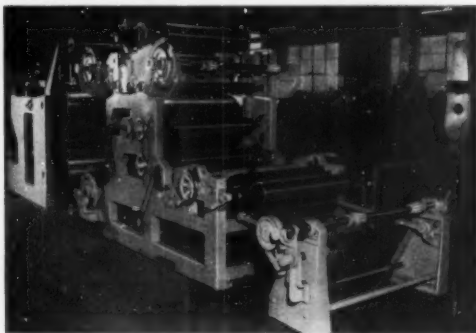


Equipment and materials

is able to apply adhesive to thin labels $\frac{1}{8}$ to 5 in. wide and in lengths from 2 in. and up. As a sheet dispenser, it is supplied with or without a glue pot.

A NEW WAX-BLEED LAMINATOR

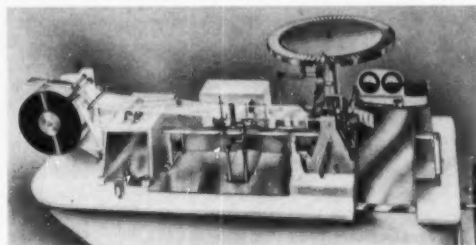
for the manufacture of the new wax-bleed laminated packaging materials now being used for heat-seal packaging of cookies, cereal, soap, etc., has been introduced by the Inta-Roto Machine Co., Byrd Airport, Richmond 23, Va. These new materials



usually consist of foil, glassine or other relatively impenetrable material which wax will not bleed through, plus light tissue back-up material which will permit wax to bleed through when heated, but which will prevent wax offset in a rewound roll. The new Inta-Roto WB-500 will run these materials in double or triple laminations. It also is equipped with a station where the outside of the foil may be treated for better adhesion of rotogravure inks. This same station may be used for coloring or coating the foil.

A SUPPOSITORY STRIP-PACKAGER

which wraps suppositories of any shape or size into a continuous strip of cellophane has been announced by the Pharmaceutical & Chemical Industry Supply Co., a division of the American Roland Corp., 16 Hudson St., New York 13. The Model Vs machine illustrated packs the suppositories close together for



compact packaging and economy of material. It seals the cellophane tightly around each individual suppository, providing hermetic protection and, according to the company, helping to hold the product in shape even at warm temperatures. Speed is said to be at the rate of 70 units per minute with one operator to feed the product into pockets of a revolving disk. The unit includes a cutting device for automatic cut-off of any number of suppositories from one to 12 to a connected strip and a counting mechanism records production. A timing device is provided

Better Package... Lower Cost with a **BARTELT** Packager

MAKES POUCH BAG AUTOMATICALLY FROM ROLL OF HEAT SEALING PAPER—FILM—OR FOIL

Here is fast, automatic packaging at low cost... resulting in a sturdy, attractive, convenient package that will boost sales, and cut waste. The base machine makes a pouch-style bag, opens it for filling, seals it, and discharges a complete package. Design allows for selection of the filling equipment best adapted to your product. Whether you are packaging liquid, powder, solids, or multiple items, the Bartelt Machine will handle your needs. Below are shown the packages of a few of the many nationally known manufacturers who use Bartelt.



WRITE FOR INFORMATION TODAY...



EQUIPPED WITH WARNER
electric
motion control

BARTELT ENGINEERING COMPANY

1904 Harrison Avenue, Rockford, Illinois



IT OFTEN PAYS OFF, in increased sales, to use an acetate box. But if your product requires one of the other types listed below Zumbiel will assist you to obtain the best value.



C.W. ZUMBIEL COMPANY good packaging ideas

FRANKLIN, OHIO

Norwood 12, Ohio

It's **modern**
...if it's **plastic**

Keep Pace with an

Ever Ready Label

For best design, labor-saving and practical application of labels... at prices in keeping with modern needs, be sure to call on EVER READY!

Free!



Ever Ready is in the forefront of labeling development, collaborating closely with leading manufacturers in the paper, plastics, adhesives and related industrial fields... improving standard lines and developing new ones. Every facility, mental and mechanical is here at your service. There is no label problem that can't be solved at EVER READY. That's the challenge... accept it please!

Send for Ever Ready IDEA-BOOK

Ever Ready Label Corp.
357-361 Cortlandt St., Belleville 9, N. J.

"I like the 'PLUS' features of this DOUGHBOY Heat Sealer!"



- CODING • HOLE PUNCHING
- COMPRESSION SEALING • FOLDING

YOU'RE years ahead with the extra features found only in DOUGHBOY'S "AT" Rotary Heat Sealer. Besides unparalleled speed (up to 900 inches per minute), the "AT" offers foolproof devices for easy handling of difficult code-dating, hole punching, compression sealing and bag folding jobs. In addition, its standard tilting device permits quick adaptation for prefabricating bags or barriers.

Other DOUGHBOY Heat Sealers include the Continuous Band Sealer (CBS), which features air cooling, and the versatile Power Hand Sealer (PHS), the portable rotary sealer that solved the "skipping" problem.

They're super-sealed by DOUGHBOY!



LET OUR ENGINEERS work with you on your heat sealing problems. Write today for detailed information.



DOUGHBOY INDUSTRIES, INC.

MECHANICAL DIVISION • NEW RICHMOND, WISCONSIN

Equipment and materials

to assure that the imprint appears directly over each individual suppository when printed cellophane is used. The machine comes complete for packaging a single size suppository; interchangeable parts for other sizes may be obtained.

A KNOCKED-DOWN-CARTON TYER

that takes stacks of knocked-down corrugated boxes coming from counter-stackers and automatically double ties the stacks into bundles at the rate of 15 to 20 bundles per minute is said by its manufacturer, the B. H. Bunn Co. 7605 Vincennes St., Chicago 20, to eliminate one of the last hand operations in the corrugated box industry. The operation is straight line, enabling the machine to fit into a conveyor-system operation. It is basically a left-hand and right-hand tyer coupled in such a way that both twine arms revolve in the same direction. A trip permits engaging both tyer units at the same time. This dual engagement makes possible simultaneous ties at both ends of the bundle. Two sizes of machines are available: a smaller one for bundles no wider than 26 in. and a larger unit for widths up to 34 in. There is no limit on the length of bundles (across the ties) that can be handled. Ties may be spaced from 14 in. to 6 ft. apart. The machine is available on a trial basis without any obligation except payment of freight costs.

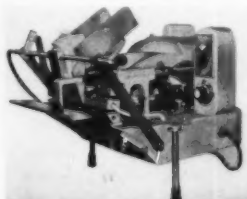


A LAMINATING ADHESIVE FOR POLYETHYLENE

called "L-929 C" has been announced by the Lyndhurst Chemical Corp., 85 Liberty St., Passaic, N. J. It is a pressure-sensitive adhesive, water white and produced at 55% solids. The company says "L-929 C" may be applied by aniline rolls, will not attack polyethylene or cause distortion or shrinking on drying. It can be used to laminate polyethylene to cellophane, paper or metal, according to the company.

A VACUUM-FEED HEAT SEALER-LABELER

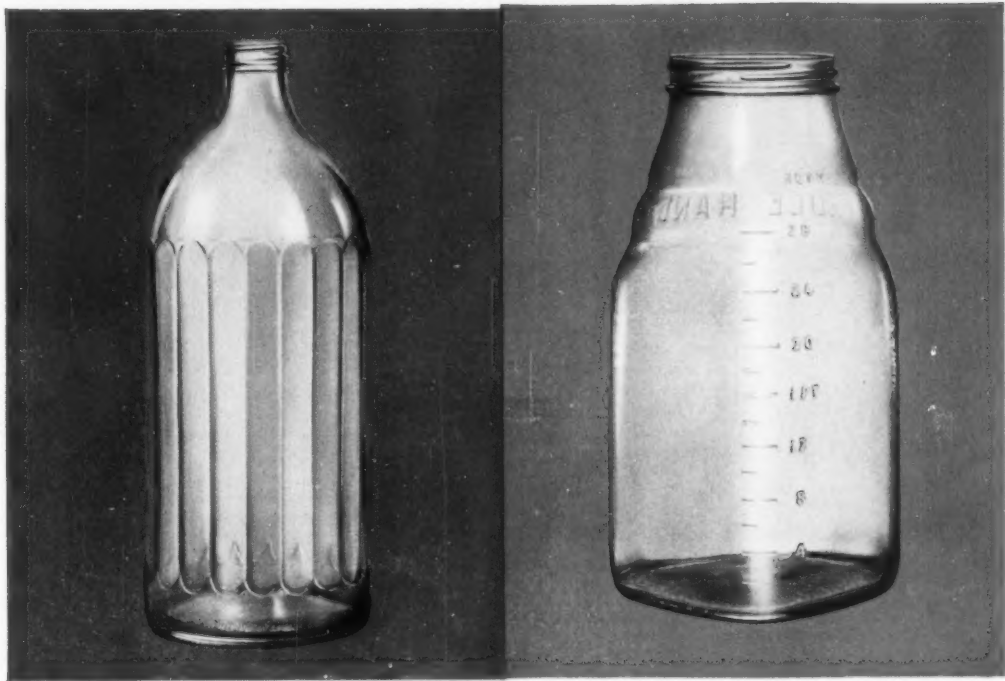
which feeds, folds and seals label and bag in one automatic operation is now being marketed by the Mercury Heat Sealing Equipment Co., 331 N. 11 St., Philadelphia 7. Called the "Mercury Vacuumatic," the recently perfected unit can fold labels exactly in half or short on one side, as required. Label widths from 2 to 7 in. can be accommodated. The automatic vacuum label feed has a control valve to regulate speed of label release to accommodate varying bag weights and materials. The sealing and labeling machine, which is designed to heat seal cellophane, polyethylene, Phlofilm and other heat-sealing films and foils, can also be operated as a straight sealer.



A NEW ELECTRIC HOTPLATE

introduced by the Vulcan Electric Co. of Danvers, Mass., offers stepless adjustment thermostatic heat control. Any required uniform surface temperature can be maintained, it is said, by

HERE'S HOW A CONTAINER CAN HELP SELL A PRODUCT



Here's the stock design bottle a vinegar packer had been using. It was economical and serviceable. But, it made his product look like everyone else's. He wanted a bottle that would make his vinegar stand out—that would make impulse buyers reach for *his* bottle. It would have to be reasonably priced, however. And it should have re-use value for the housewife. Armstrong's packaging specialists worked with this packer to create a bottle with these advantages.

Here's the new, private-mold container they came up with. It fills faster because of its wider mouth, and the broad side panels give a better labeling surface. It takes less shelf space, and its 63-mm. cap leaves plenty of room for price marks. But the biggest advantage is for the customer. She can use it for mixing all sorts of things—baby's formula, fruit juices, salad dressing. Once graduations are blown into the glass, and shoulders are tapered for easy pouring.

**Armstrong's
Glass Containers**

This is, typical of the kind of design problems Armstrong's packaging specialists are handling every day. They're constantly working with the salesmen in the field in solving a wide variety of packaging problems.

What about your container? Could its performance on your filling lines be improved? Could it get more attention in self-service outlets? If so, chances are Armstrong can help. Just call your near-by Armstrong office or write Armstrong Cork Company, Glass and Closure Division, 2303 Prince St., Lancaster, Pa.



For Better Flexographic Printing

Use **no-flex** PLATE ROLLS



- CAN'T FLEX OR WHIP
- GROUND FINISH INSURES ACCURACY
- FAST DELIVERY
- LOW IN COST

**UNCONDITIONALLY
GUARANTEED
FOR SEVERE
SERVICE**

CUTAWAY SHOWS HOW EXCLUSIVE PROCESS FUSES ENTIRE JOINT INTO ONE SOLID MASS, INSURING EXTREME RIGIDITY. TUBE CONSTRUCTION REDUCES WEIGHT.

No-Flex — the new plate rolls that completely eliminate flexing and whipping — are your guarantee of a perfect impression. Special high speed lathes and equipment and improved methods of manufacture mean you get precision made rolls, quickly, and at lower cost. All No-Flex rolls are ground finished to your exact specifications and carefully inspected before shipment. The next time you need plate rolls, call Pamarco for faster service, lower cost and a better printing job.

EVENFLO FLEXOGRAPHIC INKING ROLLS METER THE INK FOR BEST RESULTS

EVENFLO ENGRAVED ANILINE INKING ROLLERS — Eliminate ink waste, poor quality runs and rejects due to faulty inking and require no time-consuming adjustments. Evenflo Rollers meter the ink in the exact quantity needed, continuously and automatically. Proper inking — without operator attention — saves stock, ink, press down-time and operator fatigue. Using Evenflo Flexographic Inking Rollers means high production quality — lower production costs.



ENLARGED VIEW OF ENGRAVED SURFACE SHOWS SCREEN THAT AUTOMATICALLY FEEDS CORRECT AMOUNT OF INK.

Quotations on plate, impression and special rolls supplied promptly without obligations

PAMARCO

**EVENFLO ENGRAVED ROLLERS
ROLLS FOR INDUSTRY
FAST, NATION-WIDE SERVICE**

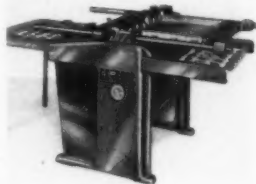
PAPER MACHINERY & RESEARCH, INC.
1014 OAK STREET • ROSELLE NEW JERSEY

Equipment and materials

simply setting the pointer on the dial in front of the unit. The dial is graduated from zero to 100. While designed primarily for laboratory use, the hotplate can be used for sealing packages. Constructed entirely of steel, the unit is 3½ in. high, with a top plate 6 in. in diameter, and its heating element can be replaced. An additional switch in the cord is available to provide three-step temperature control.

SILK-SCREEN PRESSES FOR SMALL-SIZE SHEETS

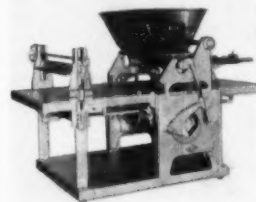
now available from the General Research & Supply Co., 572 S. Division St., Grand Rapids, Mich., are reported to provide a new measure of flexibility, efficiency and economy. The new presses are capable of speeds up to 3,000 sheets per hr. and come in two sizes—the Model 18 handling sheets 13 by 20 in. and the Model 24 handling 17-by-25-in. sheets. Suitable applications include labels, decals, daylight fluorescent work, etc. The company states that all types of silk-screen inks and adhesives may be used and that paper up to 40-pt. board can be printed. Hairline register is adjustable while the press is running. Other features include 15-min. make-ready, line contact printing for sharpness and automatic color distribution. Construction is cast iron with stainless-steel cylinder jacket and aluminum feed boards.



A NEW SIX-LINE FILLER AND CAPPER

for paint, lubricant and chemical containers, developed by the Filler Machine Co., Inc., Philmont Club Station, Pa., has a speed up to 120 per minute. The machine fills from several ounces to quarts and can be set

up to handle sizes up to a gallon by addition of a few parts. Containers may be fed manually or automatically. Only one operator is required to put caps in position as containers move from filling stations to the cap-pressing device. The company states that change-over is fast and cleaning of hoppers, valves and cylinders is easy. Containers are indexed through



the machine by a combination walking beam and pin-lug-type push rods designed to minimize starting and stopping impulses. An automatic feeder and agitator can be provided. The unit is rugged, with all contact parts of bronze or stainless steel.

PAPER LABELS ADHERE TO POLYETHYLENE

containers with Poly-Grip, an adhesive developed by Adhesive Products Corp., 1660 Boone Ave., New York 60, according to the manufacturer. The company says that the adhesive, suitable for use in conventional labeling machines, permits successful paper labeling of polyethylene squeeze bottles and other polyethylene containers and objects.

LAMINATED PLASTIC FILMS

for packaging liquids, creams and powders are announced by the Arvey Corp., 3462 N. Kimball Ave., Chicago 18. The materials are combinations of cellophane, polyethylene, Phiofilm,

DEVELOPED FOR THE ARMED FORCES

• NOW AVAILABLE TO YOU

NOW WITH
ATTRACTIVE NEW
DISPENSING UNIT

*U.S. PAT. APPLIED FOR

The sensational new Dill Aerosol Valve completely eliminates the serious problem of "duds" in pressurized products. *Gas positively cannot escape through this new non-pierced valve. Nor can contents of the can touch and corrode the valve shut-off seal.* Pre-use leakage that causes costly stock loss and user dissatisfaction is impossible. Check this money-saving, highly valuable merchandising feature for your product now—and the important further advantages in filler production operations. We invite your request for test samples and the consultation of our engineers.

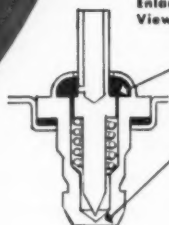
INSURES THE SHELF
STABILITY OF YOUR
PRODUCT —

THE VALVES WITH
Super Seal SAFETY

NEW DILL LEAK-PROOF AEROSOL VALVES

GUARANTEES PERMANENT "SHELF-LIFE"
FOR SELF-DISPENSING PRESSURIZED PRODUCTS

Enlarged Cross-Section
View of Dill Valve

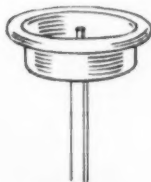


Full Enclosure of
Shut-off Valve Seat
PREVENTS CORROSION

Non-Pierced Valve Opening.
POSITIVELY LEAK-PROOF
Gas leakage is impossible be-
cause valve opening is not
pierced until ready to use.

VALVE UNIT CAN CLOSURE

No button on closure elimi-
nates damage to cans caused
by button interference with
crimping operation.
Valve unit available for any
type or size of can.



NEW DISPENSING UNIT WITH PROTECTIVE CAP

Completely pre-assembled for
quick, easy attachment to can
closure. Includes dispensing
button, collar with spray
guide, protective cap and
insert tag with easily under-
standable directions for pierc-
ing valve and operating spray.
Non-turnable button locks
spray opening in collar guide.

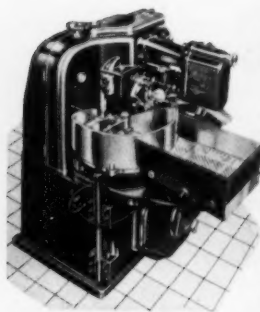
Available in any color or
combination of colors and
with your name molded in
cap on minimum orders.



Adds Attractive
Soleability to
Your Product

DILL

AEROSOL VALVES



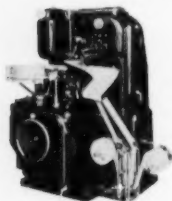
G-D "2350"

with
**COMPLETELY
AUTOMATIC
FEED**

WRAPS UP TO

350 HARD CANDIES A MINUTE

Now wrap all types of plastic hard candy, solid or filled, in waxed paper, cellophane, or cellophane and foil, at speeds up to 350 per minute. The G-D "2350" is the first candy wrapping machine with completely automatic feed—increases production—saves time and labor. A quick, easy adjustment for candy of different size or shape. The "2350" is built to last, easy to maintain, and so simple to operate that only 1 operator can supervise a battery of them. Speed control is fully adjustable. Write for complete details.



G-D "2250"

wraps up to

250 Hard Candies a Minute

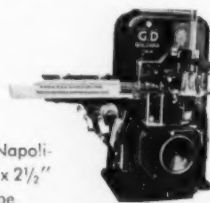
With semi-automatic feed, one operator can wrap any shape of preformed hard candies in plain or paraffin paper, cellophane, or cellophane and foil, with either double bow-twist, single bow-twist or side bow-twist. Write for full details.

G-D "2160"

wraps

160 Bars a Minute

Chocolate bars, candy bars, Neapolitans, etc. from $\frac{5}{8}$ " x $\frac{7}{8}$ " to $5\frac{1}{2}$ " x $2\frac{1}{2}$ " and up to $\frac{3}{4}$ " thick, can be wrapped, using an inner wrapping of aluminum foil, parchment or waxed paper, and a band or an envelope for the outside wrapping. For full details of this machine's advanced design for feeding, wrapping and delivery, write for bulletin.



Caesar A. Mascherin

Exclusive Representative for G-D of Bologna, Italy
15 Park Row New York 38, N.Y.

Equipment and materials

vinyl, saran and paper-backed foils. Transparent, semi-transparent or opaque packages, which may be colorfully printed, can be made in many shapes from the laminated combinations of these materials which the company has developed. Package characteristics can be tailored to product requirements such as "breathing," airtightness, chemically inert inner surfaces, flexibility, rigidity and strength. Packages made from Arvey special plastic laminations can be used for both sampling and regular resale, the company says, and can cut handling and shipping costs by reducing size and dead weight.

A NEW HAND-OPERATED FILLING MACHINE



for gentle handling of food products, introduced by the Anderson Bros. Mfg. Co., Rockford, Ill., is said to feed cottage cheese from the hopper without breaking the curd and to handle such products as salads, gelatin salads, etc., without damage to the product. The machine is especially adapted to the needs of small and medium-sized plants. Hopper capacity is 60 lbs. Known as the Model 177 hand filler, the machine is said to provide accuracy of fill—cylinder adjustment can be made to a

maximum of 20 oz. per stroke. All parts coming in contact with food are stainless steel and there is only one moving part to the entire unit.

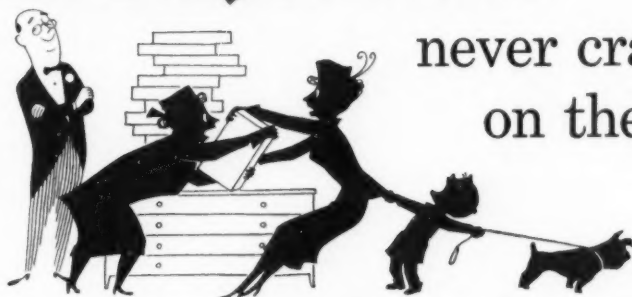
COATED CELLULOSE SAUSAGE CASING

that is said to control water-vapor transmission during processing and storage is now available in volume from the Transparent Package Co., Chicago. The product, for which patent application has been made, is known as C.M.V.P. (controlled moisture vapor permeability) in recognition of the fact that the coating can be controlled to meet the specific needs of the product being packaged. Present use is for liver-sausage casing. The new material reduces surface discoloration, crusting and weight loss of this product during processing and thereafter, and its dimensional uniformity reduces sagging and re-tying, according to the company. Sharp multicolor printing on the casing provides brand identification. Sausage in C.M.V.P. can be sliced readily by knife or machine. The new casing is available to packers in an opaque "Tropical Tan" color; sizes are 1½ in. prestretch and 2½ in. high-stretch, both in any length.

A PRODUCTION-LINE CARTON STAPLER

which simultaneously closes tops and bottoms of filled cartons from the outside at speeds better than 350 per hr. has been announced by International Staple & Machine Co., 801 E. Herrin St., Herrin, Ill. The new Staple King unit has the company's patented retractable anvil feature. Center-slotted, partial-overlap and full-overlap cartons of either corrugated or fibreboard construction can be closed. The stapler is air operated and has foot-pedal control of the stapling heads. On mixed runs, the upper stapler head travels up or down automatically to accommodate cartons that vary in height by as much as 5½ in. from the setting; a two-second adjustment sets the height when variation exceeds the limit of automatic control, the company says. Cartons pass through the stapler on a section of the roller table which can be adjusted to the height of an existing conveyor system. The company says that stapled closures are unaffected by temperature or humidity.

VISQUEEN



never cracks up
on the job!

takes shopper handling abuse, resists punctures
and tears—adds more eye appeal

Women (and men too, sometimes) are murder on apparel items and white goods on display. They pinch and poke, squeeze and pull. VISQUEEN film lets them *feel* and *see* the merchandise and still protects it from those prying fingers, from soiling and the inevitable mark-down losses.

And VISQUEEN does more than provide the greatest packaging protection—it builds up display value and quality appeal, makes yours

the "wanted" merchandise because it's so clean and neat and rich looking.

VISQUEEN doesn't split, crack or break apart. Doesn't get brittle or dry out under display lights... is hard to tear or puncture. VISQUEEN actually will outlast the product it protects.

SEE A VISQUEEN CONVERTER. He can give you the better packaging you need—and probably at lower cost. The coupon is for your convenience.

IMPORTANT! VISQUEEN film is all polyethylene, but not all polyethylene is VISQUEEN. VISQUEEN is the only film produced by process of U. S. Patent No. 2461975. Only VISQUEEN has the benefit of research and technical experience of The Visking Corporation, pioneers in the development of pure polyethylene film.

VisQueen® film... a product of the

*T. M. The Visking Corporation

VISKING corporation

Plastics Division, Terre Haute, Indiana

World's largest producers of polyethylene sheeting and tubing

In Canada: Visking Limited, Lindsay, Ontario

THE VISKING CORPORATION, BOX H3-1410
Plastics Division, Terre Haute, Indiana
Please send names of VISQUEEN converters in my area.

Name.....
Company.....
Address.....
City..... Zone..... State.....

Now- **Kard-O-Pak**

PAPER BAGS ...give lasting protection even to **DELICATE DESSERT** **FLAVORS!**

KARD-O-PAK, with its completely heat-sealed plastic interliner, gives this highly perishable product complete and lasting protection at the most nominal cost. S. E. R. Gelatine Desserts are another important addition to the growing list of KARD-O-PAK users in the food field.



Kard-O-Pak

THE PAPER BAG WITH VACUUM FRESHNESS

- LOCKS in freshness, flavor, aroma.
- KEEPS out moisture, air, odors.
- SELF-OPENING flat bottom for use on automatic filling equipment.

Write for samples

also available
A complete line of
flexible containers from
design to volume
multi-color printing.

AMERICAN BAG AND PAPER CORP., Water and South Sts., Phila. 47, Pa.

- 1 SELECT the items you want
- 2 CIRCLE the corresponding numbers on the post card
- 3 FILL IN the information requested
- 4 MAIL — no postage required

HELPFUL LITERATURE

FREE

There is valuable data — worth dollars and cents to you — in the literature and samples described below.

EQUIPMENT • SUPPLIES • SERVICES

STEEL STRAPPING EQUIPMENT. Bulletin illustrates and describes the "Steelband" line of steel strapping, seals, tools, and accessories. Table shows width, thickness, feet per pound, tensile strength, and various types of strapping. Allegheny Steel Band Co. (C-351)

PLASTIC VIALS. Bulletin points up the advantages of using light-weight shatter-proof plastic vials with flexible plastic closures for the packaging of drug products. Lerner Plastics, Inc. (C-352)

LABELING WITHOUT GLUE. Folder explains the production advantages of dry labeling and illustrates three automatic machines applying thermoplastic labels. New Jersey Machine Corp. (C-353)

LABEL SEALING MACHINE. Folder gives details on the "Label Seal-It" for applying labels to bags and sealing them in a single operation. Globe Heat-Seal, Inc. (C-354)

PROTECTIVE PACKAGING PAPERS. Brochure discusses how glassine and greaseproof papers are made, their principal applications, and features and benefits. Riegel Paper Corp. (C-355)

SNAP ENVELOPES. Folder contains a selection of special envelopes which may be sealed and reopened many times by use of a unique snap closure. United States Envelope Co. (C-356)

VACUUM FEED LABELING MACHINE. Bulletin explains the features and operation of the Mercury "Vacumatic" heat sealing and labeling machine which feeds, folds, and seals label and bag in one automatic operation. Mercury Heat Sealing Equipment Co. (C-357)

STARCH FOR PAPER MAKING. Folder describes a number of types of starch used in the paper industry for paper making, coating, and converting. National Starch Products. (C-358)

BAG MAKING, WEIGHING AND FILLING MACHINE. Details and specifications on the "Pakit" machine for performing the complete packaging of any free flowing product in one, two, and three pound units. Package Machinery Co. (C-359)

ROLL CHANGING. Description of "The Kohler System" for changing unwind and rewind rolls of web material without reducing the speed of the process. Dilts Machine Works, Div. The Black-Clawson Co., Inc. (C-360)

AUTOMATIC WRAPPING MACHINES. Bulletin explains the features of various Hayssen automatic wrapping machines for bacon, wieners, sausage, and other similar products. Hayssen Mfg. Co. (C-361)

PLAIN AND DECORATED STEEL SHIPPING BARRELS. Catalog covers various styles of closed and open-head barrels for shipment of liquid, semi-liquid, solid, and granular products. Details on construction, decoration, agitators, and standard dimensions. J & L Steel Barrel Co. (C-362)

BEMIS "QUANTACOLOR" BAGS. Booklet explains the "Quantacolor" method for selecting the most suitable combination of colors for a package, and its relationship to Bemis service. Bemis Bro. Bag Co. (C-363)

BOTTLE LABELING. Folder lists methods for applying labels to bottles manually or by machine. Includes label characteristics affecting adhesive selection and a listing of the most popular Paisley bottle labeling adhesives. Paisley Products, Inc. (C-364)

SAFETY SEAL AEROSOL VALVES. Permanent shelf-life valves for containers of insecticides, deodorants, aromatics, etc., are described in a folder issued by the Dill Manufacturing Co. (C-365)

AUTOMATIC TAPING MACHINE. Bulletin gives details on a new machine which automatically applies any standard width gummed tape to cartons as they come through a conveyor line. Particularly well adapted to brewery cartons. Wagner Iron Works. (C-366)

INTEGRATED MANUFACTURING OPERATIONS. Booklet explains how its various divisions — research, glass making, packaging machinery, plastics, and heavy machinery — can be of service in the solution of a wide range of industrial problems and manufacturing operations. Standard-Knapp, Div. of Emhart Mfg. Co. (C-367)

CARTON FORMING AND LINING MACHINE. Booklet explains the operation and lists specifications of Peters machines for forming, lining, folding, and closing die-cut cartons at high-speed. Peters Machinery Co. (C-368)

AUTOMATIC PACKAGING MACHINE. Details on an automatic machine for liquids, powders, and other items, which makes a bag, fills and heat-seals it in a continuous operation. Bartelt Engineering Co. (C-369)

SHIPPING HEAVY PRODUCTS IN CORRUGATED BOXES. Booklet explains the easiest, most efficient, and most economical methods of handling and shipping heavy products packed in corrugated boxes. Hinde & Dauch Paper Co. (C-370)

PACKAGE FILLING MACHINES. Four bench models of the "Whiz-Packer" for filling all types of free flowing and granular products, plus a description of the hopper feed conveyor. Frazier & Son. (C-371)

IN-LINE CARTON MAKER. Reprint of two magazine articles about an automatic carton machine which prints, die cuts, and strips in a single pass of roll stock through tandem equipment. Champlain Co., Inc. (C-372)

TAPE PRINTER. Specification sheet of an automatic machine for imprinting information on paper, cloth, plastic, and pressure sensitive tape. Markem Machine Co. (C-373)

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BUNDLING WITH "SCOTCH" BRAND TAPES. Application photos show how various grades of "Scotch" brand pressure-sensitive tapes can be used for combining packages into "deals," holding palletized loads, bundling steel pipe, and holding protective coverings. Minnesota Mining & Mfg. Co. (C-374)

"CEL-O-SEAL" BANDS. Booklet describes tamper-proof cellulose closures for bottles, which are colorful and which allow space for quick price marking on top. E. I. du Pont de Nemours & Co., Inc. (C-375)

GLUES AND CEMENTS. Bulletin explains the operational features and uses of Schaefer machines for applying various types of gums, glues, and cements to paper, leather, cardboard, cloth, and other sheet materials. Schaefer Machine Co. (C-376)

PHOTOELECTRIC CUT-OFF REGISTRATION CONTROL. Booklet explains the operation and advantages of "EMP Complete Unit Photoelectric Registration Control" for maintaining accurate register and cut-off in bag making and other high-speed web equipment. Electronic Machine Parts, Inc. (C-377)

BAG WEIGHT CALCULATOR. Handy plastic slide chart permits rapid calculation of weight-per-thousand for polyethylene bags of any size or gauge. Durethane Corp. (C-378)

PLATFORM SCALES. Specification sheet on a floor model and a bench model general purpose platform scale manufactured by The Exact Weight Scale Co. (C-379)

WATERPROOF CASE LINERS. Data on "Submerso-Pak" moisture-proof, watertight, creped asphalt-laminated Kraft paper case liners for protection of a wide range of products. Cincinnati Industries, Inc. (C-380)

BAGS AND WRAPS. Portfolio of flexible package samples converted from all types of films and papers and featuring such graphic arts processes as rotogravure, aniline, and letterpress. Onelda Paper Products, Inc. (C-381)

AUTOMATIC TWINE SEALING MACHINE. Folder describes a 10-in. and a 14-in. machine for automatically wrapping various size bundles with twine, and for applying a metal seal to the closure to insure security. Gerrard Steel Strapping Div., United States Steel Corp. (C-382)

MILITARY PACKAGING SUPPLIES. "Flexkin" folder contains samples and data on a number of protective barrier materials which are approved for use under specifications MIL B-131 A, JAN-P-131 (Amendment 3, Type 1), AN-B-20 (Type 3). Price list included. Aeme Backing Corp. (C-383)

RIGID PLASTIC CONTAINERS. Catalogue contains illustrations, dimensions, color selections, and suggested uses for nearly 200 stock plastic boxes which are molded of "Styron." Lists sources where these items may be obtained. The Dow Chemical Co. (C-384)

CAP FEEDING MACHINE. Bulletin describes the operation of the "Sterling No. 2" feeder for feeding or sorting molded or metal turn-on closures of all types without breakage. Pneumatic Scale Corp., Ltd. (C-385)

GUILLOTINING CELLOPHANE. Hints on the most efficient methods for cutting cellophane into sheets with a guillotine cutter are contained in a booklet published by British Cellophane, Ltd. (C-386)

"HYDROTONE" INK COLOR SELECTOR. Selector shows 30 different standard ink colors, and dozens of color combinations for printing kraft, tissue, or other absorbent stocks. Bensing Brothers & Deeney. (C-387)

"ALCOWAX." Description of the chemical and physical properties of "Alcowax," a low-molecular weight material which is resistant to water and chemicals and may be used for coatings for paper and containers. Semet-Solvay Div. Allied Chemical & Dye Corp. (C-388)

HEATER BARS. Data sheet and price list on alloy surface and "Teflon-Fiberglass" surface heater bars for use in Vertrod "Thermal Impulse" heat sealing machines for all types of plastic films. Vertrod Corp. (C-389)

LABELING IDEAS. Brochure contains hundreds of suggestions on sizes and styles of labels for packaging and shipping. Ever Ready Label Corp. (C-390)

DESICCANT. Reprint from MODERN PACKAGING magazine explains new uses for "Desiccite 25," a dehydrating agent which meets the needs for the packaging field for a stable desiccant that is odorless and tasteless. Filtrol Corp. (C-391)

PRINTED TISSUE. Samples of four single and multicolor printed tissues which are used to protect soft goods and hard surfaces of appliances, etc. Green Bay Tissue Mills. (C-392)

FILLING MACHINE. Bulletin on a new "Tripweigh" for automatic feeding and weighing of products in units from 2 ounces through 1 pound, and semi-automatically filling them into bags, boxes, and cans. The Woodman Co. (C-393)

TAMPER-PROOF AND SCREW CLOSURES. Folder with numerous application photos showing how "Filma-Seal" closures and regular screw caps are used to protect various products from leakage, evaporation, air and moisture exchange, and tampering. Ferdinand Gutmann & Co. (C-394)

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Plants and people

J. D. Malcolmson, with **Robert Gair Co., Inc.**, New York, since 1922, has relinquished his duties as manager of the Products Development Dept. of that company and has moved to Berkeley, Calif. Mr. Malcolmson will remain on Gair's staff, working from the West Coast on a consulting basis. He will also continue to represent the company on various industry committees. Mr.



J. D.
Malcolmson

Malcolmson, one of the leading authorities on the subject of paperboard shipping containers, is the only representative of the paperboard industry on the Munitions Board Advisory Committee, is on the board of directors of the Packaging Institute and is chairman of the Technical Advisory Committee of the Fibre Box Assn. **Alan Grayson Lynn** has been appointed manager of the Products Development Dept. to succeed Mr. Malcolmson.



R. C. Dickey

Gair has appointed **Robert H. Levine** as sales representative for Foilene cartons. He will be located at Gair's new Chi-

cago office for the Foilene Div. at 20 N. Wacker Drive, Chicago 6. **Roger C. Dickey** has been appointed assistant to the process engineer and will be in charge of mechanical packaging for the Folding Carton Div.

Denton Anderson has been elected vice president of **Plax Corp.**, West Hartford, Conn., manufacturers of Plaxpak squeezable bottles and other plastics products. Mr. Anderson, who has been assistant vice president and general sales manager since 1951, continues as general sales manager.

A new sales group for packaging adhesives has been set up by **The Borden Co.**, New York, as a result of expansion by its Chemical Div. **Raymond J. Lodge** has been appointed sales manager for the group which has been set up to handle sales of adhesives to paper converters, label industries, cigarette manufacturers and other users of packaging adhesives. The new group was formerly part of the Chemical Div.'s Specialty Dept., whose sales manager is **Louis J. Jaworski**.

Kenneth L. Edgar, recently appointed sales manager of Velon products of the **Firestone Plastics Co.**, Pottstown, Pa., has announced the following changes in

the sales staff: **Charles F. Edelmann** has been named manager of manufacturers' sheeting sales and **Edward V. K. Jaycox** is now manager of packaging and new products sales.

The United States District Court in Chicago has upheld the validity of U. S. Patent No. 2,487,400, held by the **Topper Corp.**, Farmingtonville, Mass., covering the molding of various articles of polyethylene and has found the **Republic Molding Corp.**, Chicago, guilty of infringement. In a subsequent agreement, Republic Molding has been licensed to manufacture and sell certain items under the Topper patent.

John A. C. March has been appointed manager of the Carton Sales Div. of **Milprint, Inc.**, Milwaukee, Wis., working out of the Chicago office.



J. A. C. March

Milprint has installed a new Harris lithography press of the largest size at its Milwaukee headquarters plant where advertising displays, cartons, labels and other items are made. The press makes use of all the latest mechanical developments and can take a paper sheet of 52½ by 77 in. It is a twin of the giant litho press installed when Milprint's new plant was constructed in 1951.

Wayne E. Gary has joined the Eastern sales office of **J. L. Ferguson Co.**, Joliet, Ill. Mr. Gary's knowledge of machine operation and maintenance and his ability to analyze production requirements are expected to be of value to prospects interested in the latest packaging methods and Packomatic packaging machinery.



W. E. Gary

William B. Wine and **Thomas D. Strickland** have been made vice presidents of **Lassiter Corp.**, Charlotte, N. C., package designers and printers. Mr. Wine has become sales manager of the corporation's Transparent Products Div. in Greensboro, N. C., while Mr. Strickland has taken over similar duties with the Georgia Div.

A General Research Organization for **Olin Industries, Inc.**, East Alton, Ill., has been formed to conduct basic research and to work with all eight Olin manufacturing

Staff changes for MODERN PACKAGING

Effective March 2, **Eugene F. Burke** joins **MODERN PACKAGING** as Executive Editor, working under the direction of **Lloyd Stouffer**, Editor. At the same time, Mr. Stouffer takes on the additional responsibility of editorial direction of the *Modern Packaging Encyclopedia*. **Christopher W. Browne**, who has been Editor of the *Encyclopedia*, is retiring from active editorial duties, but will continue to serve in an advisory capacity.



Mr. Burke

Mr. Burke for the last four years has been Editor of *Packages & People*, external house organ of the Film Department of E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., and has helped to make it one

of the outstanding publications of its kind in the country. He has also handled promotion and advertising for Du Pont's acetate and polyethylene films and has gained a wide knowledge of both the production and merchandising aspects of packaging. From a background of newspaper work, Mr. Burke in 1947 became a member of the original planning staff of *Food Topics*, where he served as Associate Editor and Merchandising Editor before joining Du Pont.



Mr. Stouffer

Mr. Burke attended State Teachers College in New Jersey, Seton Hall University, LaSalle College, the University of Delaware, and has studied at the City College of New York.

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Easy to pack, handle, display —
 this Heavy-Duty corrugated box means
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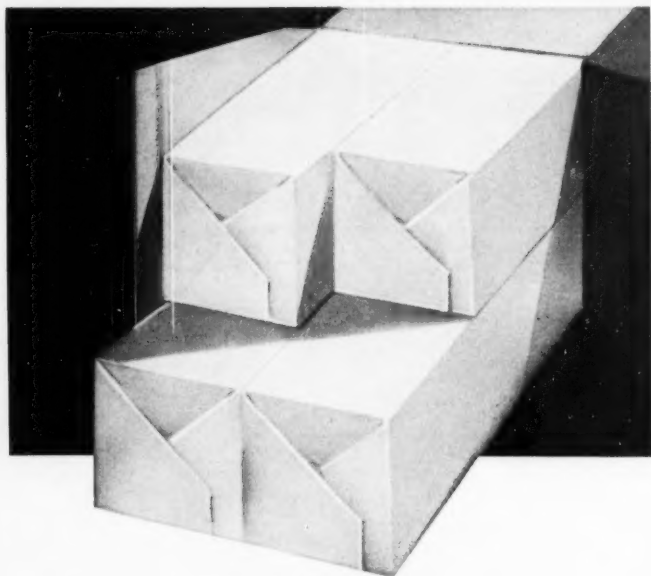
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Butter wrapped in Patapar 30-37 TW can be given additional protection with a printed paraffined overwrap or carton.

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30-37 TW is just one of the various types of Patapar. In all we have developed 179 different types. Some are used for packaging bacon, lard, giblets, ice cream, cheese, poultry, hams, and celery. In other fields Patapar is used for dialyzing membranes, separators in tiny mercury batteries, drafting paper and many other purposes.

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*Plants
and people*

divisions on long-range and specialized research problems and to coordinate the efforts of the divisional research departments. Five department managers for the new organization have been appointed: **Dr. Herman Bruson**, organic chemical research; **Melvin M. Johnson, Jr.**, armament research; **Hibben Ziesing**, petrochemical research; **Robert L. Womer**, new products research; and **Dr. Oscar J. Swenson**, chemical engineering research.

Gustav Winckelmann has announced his retirement as production manager of **Paul Jones & Co.**, Baltimore, Md., (formerly Frankfort Distilleries, Inc.), division of **Joseph E. Seagram & Sons, Inc.**, after 17 years of service with the company and over 30 years of service in production. Mr. Winckelmann, a contributor to **MODERN PACKAGING** and **Modern Packaging Encyclopedia**, plans to establish himself as a production and packaging consultant.



Winckelmann

To simplify its corporate structure, the **Aluminum Co. of America**, Pittsburgh, Pa., has dissolved a wholly owned subsidiary, **Aluminum Seal Co., Inc.**, Richmond, Ind., and absorbed it into the parent company. The organization becomes the **Aluminum Seal Division of ALCOA**.



Mr. Coudriet

Edward A. Coudriet, Jr., has been appointed development engineer by the **Inta-Roto Machine Co.** of Richmond, Va., manufacturers of laminating and other machines for converting foil, film and paper. Mr. Coudriet was formerly with **Reynolds Metals Co.**, of Louisville, Ky.

Package Machinery Co., Springfield, Mass., has appointed **Lewis A. Curtis** as New York sales manager. Mr. Curtis replaces **Ed Westervelt**, recently deceased.

Plans for expansion of the **Fulton Bag & Cotton Mills' Multivall Paper Bag Div.** with a new multivall plant in St. Louis have been announced by the Atlanta firm. The plant will be in operation by July or August of 1953.

Imperial Chemical Industries, Ltd., London, England, and **The Visking Corp.**, Chicago, have proposed formation of a

Playing Cards Crimped End Bar Cup or Mound Wafers Pencils Three Cups Modeling Clay Snowball Gum

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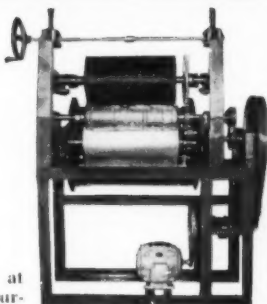
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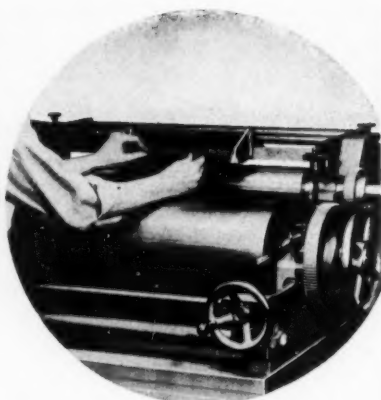
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Plants and people

joint company in Great Britain to manufacture polyethylene film. The proposed company will combine the resources of I.C.I., which discovered polyethylene in 1933, with those of The Visking Corp., which has had considerable experience in the production of polyethylene film.

American Coating Mills Corp., Chicago, has announced three appointments: **J. H.**

J. H. Reichart (left) and **C. A. Colbert**



Reichart, sales promotion manager; **Charles A. Colbert**, sales manager of the Carton Div.; and **J. A. Rogers**, manager of sales engineering. Mr. Rogers will move to Chicago to be in the company's main office. His duties involve product development, customer service and packaging machinery as it applies to the use of folding-carton blanks.

J. A. Rogers

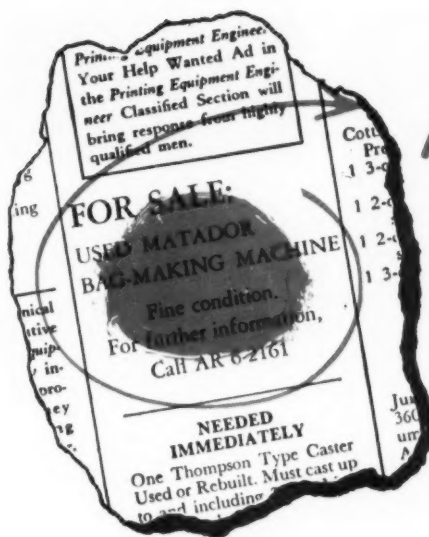
Sewell H. Corkran has retired after 22 years as New York representative of the **Rowell Co.**, Batavia, N. Y. Mr. Corkran is being succeeded by **Ross A. White**, with headquarters in New York City, where he will work with **Walter E. Klaas**.

The Mead Corp., Dayton, Ohio, manufacturer of paper, paperboard and wood pulp, has elected **A. Rodney Boren** assistant vice president for paperboard.

Stokes & Smith Co., Philadelphia, subsidiary of Food Machinery & Chemical Corp., has appointed **Richard C. Smith, Jr.**, New England representative to sell paper box and filling and packaging machinery.

Better Packages, Inc., Shelton, Conn., manufacturer of sealing-tape machines, has appointed **Leslie E. James** as merchandise manager to assist **Mills Waggoner**, general sales manager. Mr. James formerly was regional distributor for Eastern New York. **Ken Ellison** has been assigned to take over Mr. James' former territory.

National Container Corp., New York, has purchased **Empire Box, Inc.**, Atlanta,



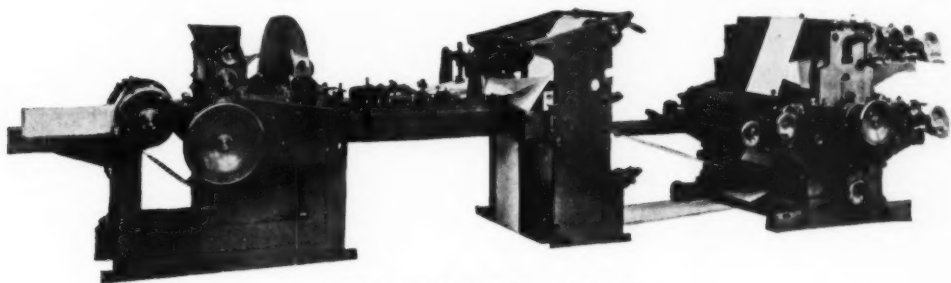
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Of all the Matador bag-making machines sold by the H.H. Heinrich Co. for more than 25 years, *none has ever been offered for resale by its owner!*

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A New York converter recently called H. H. Heinrich Co. for a replacement part for his W & H machine. The call came on Friday, a cable was sent to Germany the same afternoon. The part was flown back, installed and the machine resumed operation the following Tuesday—just four days later!



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Plants and people

Ga., and will continue production at this fully integrated box plant under the name of National Container. Sidney B. Marks has been made general manager and George R. McCarthy assistant manager of the new operation.

Steel construction is under way on the company's new \$25,000,000 pulp, board and paper mill. In operation by the year end, the new mill will hike the company's capacity 50%.

Frank Greenwall, president of National Starch Products, Inc., New York, announced the opening of the firm's Alex-



National Starch Products' new research laboratory

ander Research Laboratory, latest step in the company's \$2,000,000 resin expansion program, at Plainfield, N. J.

George H. Fry Co., manufacturer of heat-sealing and bag-gluing machinery, has announced the occupancy of a company building at 42 E. 2nd St., Mineola, N. Y.



Sutherland Paper Co., Kalamazoo, Mich., manufacturer of folding cartons and paper specialties, has made two changes in its sales administrative staff. Paul Burgderfer has succeeded Gordon Dilno as Folding Carton Div. sales manager, while Mr. Dilno has become assistant general sales manager of the company.

Acme Steel Co., Chicago, has made Edward C. Kent manager of industrial relations for its plants at Archer Ave., Chicago; Riverdale, Ill.; and Racine, Wis. Michael Butyk has been appointed superintendent of Acme's new Scarborough Works at Toronto, Ontario.

Fulton Bag & Cotton Mills, Atlanta, Ga., has appointed William P. Gatts to its Los Angeles organization.

Lily-Tulip Cup Corp., New York, has created two new sales divisions in the Midwest: the Northwestern Div. and the Mid-Central Div. The new Northwestern Div. has headquarters in Des Moines, headed by Robert M. Kittle, and covers

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UNLIMITED VARIETY OF SIZES AND THICKNESSES FOR EVERY PACKAGING PURPOSE!

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1. JAN-B-131: Grade A, Greaseproof, Non-Corrosive.
2. JAN-B-130-A: Non-Corrosive, Creped Neutral Kraft.
3. JAN-P-125: Type C-1 Waterproof, Asphalt Laminated.
4. VCI-MIL-P-3420: Vapor Corrosion Inhibitor Wrap.
5. COMMERCIAL USE: Heavy-Duty Dry Waxed Kraft.

*1. CUSHIONS against shock and pressure!
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MANUFACTURERS OF FIBRO WATERPROOF CASE LINERS • SKID COVERS • BLANKETS • SHROUDS • KRAFT LINERS & COVERS

Montana, Minnesota, the Dakotas and parts of Wyoming and Iowa. The Mid-Central Div., covering Kentucky, Ohio, West Virginia and Southern Indiana, is headed by **Henry B. Sykes**, with headquarters in Cincinnati.

Personnel changes at Lily-Tulip include **R. J. Russel**, manager of the Eastern Iowa territory; **L. E. Malherbe**, manager of the Northern Wyoming and Montana territory; **E. C. Sorenson**, manager of the Western Iowa territory; **C. S. Hinkle**, district manager at Charleston, W. Va.

International Paper Co., Bagpak. Div., New York, has appointed **R. B. Worthington** assistant sales manager. **O. W. McDuffie** will take Mr. Worthington's place as sales manager of the machinery sales and service department of the Bagpak Div.

Plans for the construction in Los Angeles of a new converting plant for the production of corrugated fibre shipping containers manufactured by the Container Div. of the company have also been announced. The new plant has a planned capacity of 48,000 tons per year.

International has opened a sales office in Dallas, Tex. **J. W. Dennett** will handle southern kraft paper and bags, while **H. T. Patton** will handle the Bagpak Div.

The name of the Culligan Zeolite Co., Northbrook, Ill., has been changed to **Culligan, Inc.**, to facilitate easier product identification. The firm produces dehydrating compounds for packaging.

Central Paper Co., Menasha, Wis., has appointed **John P. Canavan, Jr.**, as sales representative to assist **Stuart Thompson**, sales manager.

Interchemical Corp., Printing Ink Div., New York, has appointed **W. G. Sulzer, Jr.**, manager of the IPI branch in Richmond, Va., to succeed retiring **John Osias**, a veteran of 45 years in the ink industry, who will continue with the company in a sales and advisory capacity.

Foster-Forbes Glass Co., Marion, Ind., has announced that **Ray W. Roney** will join **William P. Foster** as sales representative for the Chicago territory.

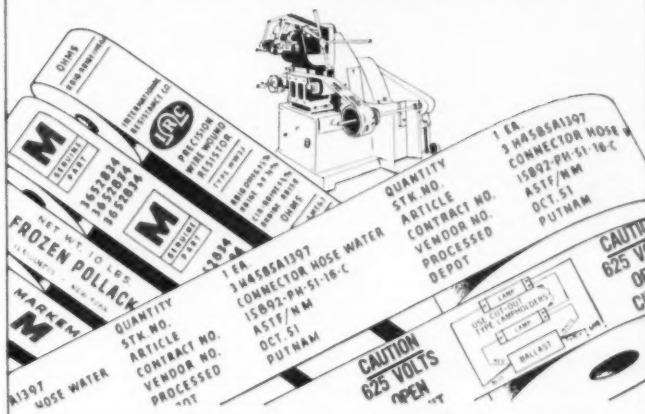
The Cryovac Div. of **Dewey & Almy Chemical Co.**, Cambridge, Mass., has established a Customer Service Dept., expanding and re-assigning its sales force. **Ralph H. Tucker** is now assistant sales manager in charge. District sales managers are **Joseph Welch, Jr.**, Eastern district; **Robert A. Miller**, Midwest; **Richard L. Jones**, Southwest. West Coast sales will be under **A. D. Angell**. **Ralph Garson** has charge of Eastern technical sales service, with **Gordon Cameron** in charge in the West.

Bobby R. Seale has joined the division as salesman at Ft. Worth; **Richard I.**

MARKEM

SOLVED THIS MARKING PROBLEM

PRINTING LABELS ON PRESSURE SENSITIVE TAPE



The introduction of pressure sensitive tape for industrial uses offered many advantages if label data could be printed on the tape in the plant itself when needed. Markem developed methods that permit printing of stock number, part number, trade mark or other designation on this tape. Label inventory problems are thus eliminated. Manufacturers can now print the exact number of labels required... readily changing variable information or color of ink when desired. The Markem method used includes a Markem machine which makes up to 85 imprints per minute, rewinds the roll of tape automatically, and shuts itself off after a selected number of imprints. Thus Markem has provided industries of all types with a more modern, more attractive and less expensive means of labeling.

MARKEM

MARKS THEM ALL



CAN MARKEM HELP YOU?

Printing labels on pressure sensitive tape is but an example of how Markem solves industry's marking problems. Markem has been providing industry with production techniques and equipment to identify, decorate or designate its products, parts and packages since 1911. Markem also provides technically trained men who are available in your area to assure continued satisfaction with Markem methods and equipment.

When you have a marking problem, tell us about it and send a sample of the item to be marked. Perhaps a complete Markem method has already been developed to solve your problem. If not, Markem will work out a practical solution.

Markem Machine Company, Keene 1, N. H., U.S.A.

MARKEM
...TO MAKE YOUR MARK

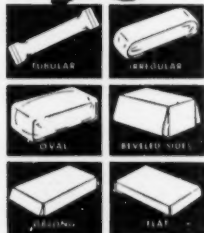
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would you like to package

**BETTER
CHEAPER
FASTER...**

at Speeds of 3 Units per Second!

Solid or fragile — regular or irregular shapes — single or multiple products per unit. It makes no difference to the automatic, continuous feed, high speed operation of the Campbell Wrapper. You achieve important savings in labor and materials, too. Automatic feeds, in many cases, permit *one* person to tend several machines — And, boards or stiffeners need *only* be used if desired! Machine wraps all modern packaging materials and films with equal ease, accurately positions pre-printed identifications and provides a full range of wrapper closures . . . crimped, flared, folded . . . glue or hermetical sealing. Send us a sample of your product for a detailed report on how the Campbell Wrapper can improve and *speed up* your packaging.



Write for
illustrated
brochure.

Campbell
WRAPPER

Manufacturers of Aniline and Gravure Presses, folders, Interfolders, Laminators, Waxers, Embossers, Sitters, Sheeters, Roll Winders, Packaging Machines, Creppers and Tissue Converting Units.

Plants and people

Arthur D. Little, Inc., Cambridge, Mass., plans new research facilities to be erected on the Concord Turnpike in West Cambridge to house experimental operations.

Stanley M. Rumbough, Jr., assistant to the Secretary of Commerce in the new administration, has resigned as president of **Metal Container Corp.** and secretary and sales director of **White Metal Mfg.**

S. M.
Rum-
bough,
Jr., (left)
and H. R.
Miller



Co., Hoboken, N. J., manufacturers of collapsible tubes and metal can spouts. **H. Robert Miller** succeeds him at White Metal as director of sales and **Charles Stiassni** replaces him as secretary.

Dixie Wax Paper Co., Dallas, Tex., has announced that its third plant, at Washington, N. J., will open shortly. **Thomas S. Williams** will be general manager and **Cleon B. Miller**, plant superintendent.

St. Regis Paper Co., New York, has started production in its new kraft, paper, pulp and board mill at Jacksonville, Fla. **John K. Ferguson** is resident manager; **John A. McDermott**, general superintendent, and **U. J. Westbrook** is manager of production for the Southern Div., including pulp and paper manufacturing at both Pensacola and Jacksonville. **Albert Ernest** is vice president in charge of Southern timberlands and procurement.

Marathon Corp., Menasha, Wis., and **Northern Paper Mills**, Green Bay, Wis., are completing arrangements to merge Northern's interests into Marathon. Both companies manufacture pulp and paper, and both have paper converting facilities.

The Kidder Press Co., Dover, N. H., has appointed the **Gibbs-Brower Co., Inc.**, New York, as representatives for Kidder slitters and winders in the paper-mill field. In the U. S., Kidder's interests will be

BOTTLE SLEEVES
Jiffy
MACERATED PAPER
PADS & BLANKETS
SHIPPING BAGS



**... all dependable
 packaging protection**

Whatever the nature of your product, chances are there is a proper type of JIFFY packaging to protect it from transportation hazards.

If your product requires soft cushioning—JIFFY's expansion type cushioning absorbs shocks, jolts, and rough handling in transit. It won't scratch or mar even the most delicate finish!

If your product is affected by atmospheric conditions, JIFFY material is insulating. It protects contents from temperature changes.

If your product is affected by moisture—rain, snow or moisture cannot penetrate JIFFY's water-repellent coating.

Whether you use JIFFY materials as interior or exterior packaging—you can depend upon JIFFY to get your product to destination in first-class condition.

Consult our Packaging Engineers on your Packaging Problems.

Jiffy Bags meet Military Specification MIL-B-4604 (USAF).

**JIFFY
 MANUFACTURING
 COMPANY**

369 FLORENCE AVE. • HILLSIDE, N. J.

**Plants
 and people**

represented by Ogden Brouwer, Jr., president of Gibbs-Brower, John L. Brouwer, vice president, and Fred H. Kossow, secretary. Ernest Smith will represent both Gibbs-Brower and Kidder in Canada.

Continental Can Co., Inc., New York, has acquired the Benj. C. Betner Co. of Devon, Pa. The Betner company manufactures small and medium-sized bags and, in addition to the Devon plant, also operates plants at Richmond, Va.; Paris, Tex.; Beaumont, Tex.; and Los Angeles. Continental will operate the Betner plants as a supplement to its Fibre Drum & Paper Container Div.

Continental has opened a new district sales office in Omaha, Neb., to service its new metal-can manufacturing plant which will open there late this fall. T. A. Graham is district sales manager. Guy Bollinger, Baltimore district sales manager for Continental, is retiring from active service and will be succeeded by Robert D. Heavside, formerly assistant manager. Mr. Bollinger will bring 43 years of active service in the canning industry to his new position as Continental's special representative.

CCC's Fibre Drum Div. recently appointed two plant managers: Paul E. Kreischer for the new fibre drum plant at Pittsburgh, Calif., and Vern B. Duniform for the Tonawanda plant.

Allen P. Vining has been appointed general sales manager of Bond Crown & Cork Co., New York, a subsidiary of Continental Can Co. Mr. Vining will headquarter at Bond's Wilmington, Del., offices. Ridgley G. Greathouse succeeds him as Pacific Coast sales manager.

I. F. Schmier Co., Inc., San Francisco, Calif., distributors of bottle closures and other equipment, announces the return of Al Tornquist from the U. S. Air Force to the company's sales staff.

Herb Mason, former Chicago and Minneapolis graphic designer and advertising counselor, has joined Western Lithograph Co., Los Angeles.

Hayes Adhesives Co., St. Louis, Mo., has become an affiliate of Paisley Products, Inc., Chicago (Div. of Morningstar, Nicol, Inc.). Purchase included the assets of the firm, formulas, manufacturing processes

**perforations
 for particular
 packagers**



Differing ventilation problems require different solutions. Roto Bag believes that this choice of perforations will answer your special requirements. Both perforating units are standard accessories to all Roto Bag machines. These devices do not complicate or reduce regular bag production.

CIRCULAR PERFORATION

Two longitudinal rows of holes whose number may be varied and which may be placed laterally as desired. Excellent for all packaging materials.

PARALLEL VENTS PERFORATION

Length of vent can be altered to suit. Perforation intervals and lateral placement are adjustable. This type adaptable for Polyethylene and Pliofilm only.

FOR SAMPLE PERFORATIONS

WRITE:

Roto Bag

MACHINE CORP.

130 EAST 13th STREET, NEW YORK 3

ASK FOR SPECIFICATIONS OF OUR FAMOUS BAGMAKING MACHINES.

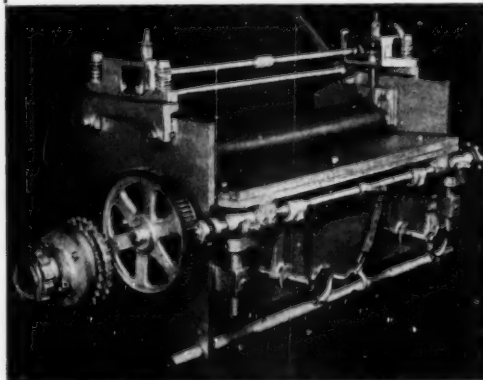


DON'T MISS SEEING

Wrap-King

at the
A. M. A. NATIONAL PACKAGING EXP.
 Navy Pier, Chicago, Ill., April 20 to 23
BOOTH No. 775 — Near crosswalk to North Hall
 961 Union St., West Springfield, Mass.

Inexpensive . . . **INDIVIDUAL
MINIATURE ROTOGRAVURE
PRINTING UNITS**



Mount one or more on your bag or packaging machine. Print as you package!

For 10", 15" and 20" web widths. The "Finest Printing in the World" on your packages.

Write for literature and prices.

MINEOLA ASSOCIATES, INC.

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Francis C. Kilb Co.

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These PRINTING UNITS can also be purchased in Main Frames, as COMPLETE PRINTING PRESSES

Specializing

**IN GOVERNMENT PACKAGES
MADE OF WOOD**

Bring your packaging problems to us to solve. Our past experience and "know-how" will help you.

We Make

- INSTRUMENT CASES
- MICROSCOPE CASES
- HYPODERMIC CASES
- TAP AND DIE CASES
- MEDICAL CASES
- AMMUNITION BOXES
- FANCY DISPLAY CHESTS
- SILVERWARE CHESTS

WOODEN BOXES AND SHOOKS

Send us your specifications — we'll do the rest.
QUICKLY — THOROUGHLY — INEXPENSIVELY

Write, wire or call today

ROCK MANUFACTURING CO.

"From Standing Timber To Finished Product"

STOUGHTON,

MASSACHUSETTS

Plants and people

and equipment at three separate locations in St. Louis. **Vernon Hayes**, former head, will continue as local manager of the St. Louis plants for the new owners, over-all supervision of which will be assumed by **Murray Stempel**, executive vice president of the Morningstar and Paisley companies. **Earl C. Lenz**, vice president and general sales manager of Paisley operations, will direct the combined sales staffs, while technical direction of laboratories and plants will be handled by **Sam Schuller**, Paisley vice president at Chicago.

Allen C. Staley, Jr., has been named assistant general manager of sales for **American Can Co.**, New York, to assist in the supervision of all Canco sales activities in the United States and Canada. **Robert C. Stolk** succeeds Mr. Staley as



A. C.
Staley,
Jr., (left)
and R. C.
Stolk

manager of sales for the Pacific Div. to direct activities on the West Coast, Hawaii and Alaska from San Francisco. **C. W. Curry** replaces Mr. Stolk as assistant manager of sales in the Pacific Div.

Dr. Louis T. Stevenson, economist of the **American Paper & Pulp Assn.**, New York, has retired and will be succeeded by **John L. Vogel**.

Forbes Lithograph Mfg. Co., Boston, Mass., has appointed **Ralph W. Poole, Jr.**, as advertising and sales promotion manager. Mr. Poole, whose background includes association in publicity and public relations, will present Forbes' products in the fields of packaging, sales promotion, point-of-sale presentation and institutional advertising.



R. W.
Poole, Jr.

Three new executive appointments have been announced by **Stone Container Corp.**, Chicago, makers of corrugated containers and boxboard: **George Chazanow** will be vice president for finance but retains his post as assistant to the firm's executive officers. **Irving G. Hefter**, a regional sales manager, is now vice

HERE'S NEW

Buy Appeal

FOR:

product bags
envelopes
candy wrappers
food insert labels
recipe inserts

Snowdrift

OPAQUE GLASSINE

Here is a special opaque glassine paper of unusual whiteness. It resists grease and stains, and protects against harmful light rays. Its white, mirror-smooth finish makes an excellent background for color printing. Wrappers, insert labels, product bags and envelopes take on new buy appeal when printed on rich, white, grease-resistant Snowdrift.

Snowdrift is ideal for insert labels or recipes in pre-packaged meats, mixes, and baked goods. Candy makers use it for protection as well as beauty. If you need a product wrap or label to attract the buyer's eye, to stay bright and clear when in contact with oily substances, then investigate economical Snowdrift.

Write for Free Test Samples

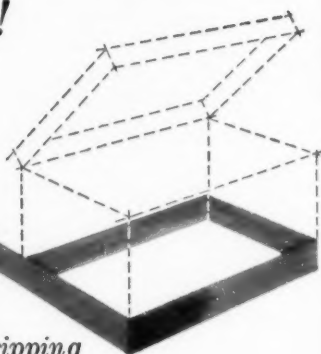


**RHINELANDER
PAPER COMPANY**

RHINELANDER, WISCONSIN

REEVES specializes in tapes

to solve
your box-binding
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- *For Glue Stripping Machines*
- *Holland Finished Cloths*
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Reeves tapes combine extra-strength with thinness . . . are specially finished to prevent glue seepage and color change.

They're made by experts who know your problems and how to solve them. Each lot is tested on Reeves own stripping machine to insure you of smooth, trouble-free production. If you are hampered in production by tapes that don't perform right—call on Reeves.



For further information and a special sample kit of Reeves Box Tapes, write us on your company letterhead.

REEVES BROTHERS INC., W. Harris Thurston Division
54 Worth Street, New York 13, N. Y.

Plants and people

president in charge of national accounts, while **Joseph J. Fiori**, general manager of paper mills, will be vice president in charge of all mill operations. **George Berliant** is now works manager of the Chicago Div. and **Fred Waugh** works manager at Mansfield, Ohio.

Riegel Paper Corp., New York, has elected **R. L. Kerridge** vice president of the company. Mr. Kerridge, a director of Riegel since 1950, will continue as assistant to the president. Also elected to the board were **W. M. McFeely**, director of industrial relations, and **C. E. Hartford**, vice president of the Riegel Carolina Corp.



R. L. Kerridge

The Pollock Paper Corp., Dallas, Tex., has appointed **Kenneth Warren** as its sales representative in Kansas, Missouri, Iowa and Nebraska.

Crown Can Co., Philadelphia, Pa., has appointed **Nathan Hall** as sales representative at the company's Orlando, Fla., branch.

Lt. Col. George F. McAneny has been appointed commandant of the **Quartermaster Food & Container Institute** for



Mr. McAneny

the Armed Forces, Chicago. Col. McAneny will guide the progress of the food research and development program toward new and improved rations for all the Armed Forces. Of equal importance will be his responsibilities in the container research and development program of the Quartermaster Corps, which is directed toward improving the packaging and packing of rations and more than 80,000 other items of Quartermaster supply.

Chippewa Paper Products Co., Inc., Chicago, has appointed **Joseph Schonberg** general manager of the company plant in South Hackensack, N. J. **Harold F. Zimmerman** has been named to represent Chippewa in northern New Jersey, all of New York and part of New England.

Minnesota Mining & Mfg. Co., St. Paul, Minn., has purchased a 125-acre tract on St. Paul's eastern boundary for construction of new research facilities. The first

TRIPLE WRAPPED!

WITH OPENING
TAPES

FOR FACTORY
FRESHNESS



5 Cigars
in box

2
Wrapped with
opening tape

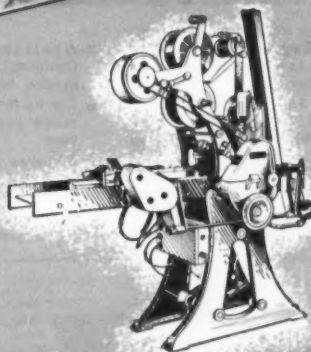
3
Multiple packed
for better
merchandising

by **SCANDIA**

Triple-wrapped PHILLIES Cigars give factory-fresh smoking pleasure. Bayuk Cigars Incorporated, makers of the famous PHILLIES, is another outstanding manufacturer using high speed, automatic SCANDIA wrapping machines equipped with opening-tape and revenue stamping attachments.

YOU, TOO,

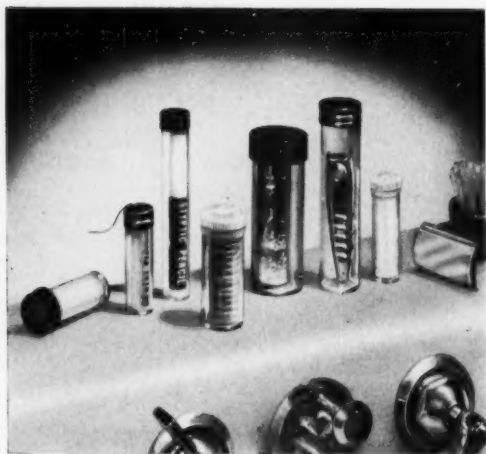
can save time, money, and factory space . . .
through SCANDIA's increased output, low
maintenance cost, and compact design.



SCANDIA

Manufacturers of Better Packaging Machinery

SCANDIA MANUFACTURING CO. • 700 BELLEVILLE TURNPIKE • NORTH ARLINGTON, N. J. • PHONE KEARNY 2-8400



YOUR PRODUCT BELONGS *HERE*

Products that linger on dealers' shelves profit nobody. Bring them home by packaging in the container that will attract customers and prospects. Package in Lerner Plastic Containers, the vehicle that offers the utmost in eye appeal, protection and long life. Even after the contents have been consumed, the containers are re-used for other purposes and your name remains with your customers as a reminder for additional purchases. You have proved that you use the finest package available and the cost to you is no more than ordinary packaging.

CONSIDER THESE UNEXCELLED ADVANTAGES OF LERNER PLASTIC CONTAINERS.

- They Are Shatterproof, Assuring Customer Good-Will
- 75% Lighter Than Glass, Saving You Money in Packing and Shipping
- Not Affected by Alcohols, Alkalis, Weak Acids
- Tasteless and Odorless
- Available Clear or Opaque, in a Host of Bright, Lustrous Colors
- Can be Printed or Decorated during Manufacture
- Always Uniform for Easy Labeling, Filling and Capping
- Available with Metal or Plastic Closures

Lerner
PLASTICS, INC.

PIONEERS AND PACESETTERS IN PLASTIC PACKAGING
502 SOUTH AVENUE, GARWOOD, NEW JERSEY

Write for complete catalog information and samples. Detail your problems and let our creative staff help. Lerner is famous for Experience, Service and Creative Engineering.

"Fresh"
OUTLOOK ON MEAT SALES!

making things Crystal clear!

"Select Bacon" is temptingly displayed in spotless fresh packaging that is "crystal clear!" The quality of the product, its trademark, and its sales appeal can't be missed. The reliability, proved experience and modern methods of Crystal Tube packaging adds sparkle to your product, sparks up your sales! To show your product at its freshest—at its best, call Crystal Tube. There's no obligation for ideas or suggestions.



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Phone NATIONAL 2-4400

Branch Offices in New York, Philadelphia, St. Louis, Minneapolis, Detroit, Louisville, Milwaukee, Dallas and Los Angeles.

Cellophane Tubes, Pouches, Bags and Envelopes; Polyethylene Bags plain and printed. Also printed roll stock and sheets in Cellophane, Polyethylene, Acetate and Foil, Plafilm, Utility Rolls, Holiday Bands and FLEXIBLE BARRIER MATERIALS

Plants and people

unit in its long-range development will be a laboratory for the Central Research Dept., of which **Harry N. Stephens** is director.

R. J. Stevens was appointed sales manager of the Multiwall Div. of the **Chase Bag Co.**, Chicago. Mr. Stevens has been associated with Chase since 1945, and before his transfer to the General Sales Department in Chicago, was sales manager of the Buffalo-New York branch. **G. N. Burns** has been transferred to New Orleans as regional sales manager of the



R. J. Stevens
Multiwall Div.

In addition, **E. S. Elgin** has been made sales manager of the Waterproof, Polyethylene and Crinkled Paper Products Dept. of the Specialty Div. at Chase. He was connected with the Specialty Dept. of the Chase Philadelphia and St. Louis branches before transferring to Chicago in 1952.

Glenn E. Holsinger has been named assistant general sales manager of **Krafco Container Corp.**, Dallas, Tex., manufacturer of corrugated cartons. **W. B. Scott** and **C. W. Dodgen**, vice presidents of the firm, have been elected directors.

The board of directors of **Emhart Mfg. Co.**, Hartford, Conn., has elected **Warren E. Hill** as vice president in charge of operations, a new post. Mr. Hill was formerly executive vice president of the Flexible Packaging Div. of **Shellmar Products Corp.**

Robert N. Allen has been appointed general manager of **Standard-Knapp**, Div. of **Emhart**, Portland, Conn. Mr. Allen succeeds **George Ingham**, recently retired. Mr. Ingham and **Malcolm McFaul**, former vice president of Emhart and district sales manager in New York City, who also retired recently, will be retained as active consultants to assist management in the formulation of policies covering expansion of the Standard-Knapp machinery line.

Other appointments at Standard-Knapp include: **L. F. Shattuck**, district manager of the New York City office; **David S. Shields**, manager of the new Buffalo district separated from the Cleveland ter-



W. E. Hill

Sterling Supreme Gummed Tape

PEOPLE MAKE THE BIG DIFFERENCE . . . All gummed tapes look much alike . . . but there's a real difference. Through the experience and ingenuity of The Gummed Products Company's Director of Research (shown here), Sterling Supreme Gummed Tape standards are maintained—and constantly improved.

Passes 46 Tests*

from raw material to finished product

Our laboratory staff is everlastingly testing new materials, new formulae, new methods, to keep the quality of Super-Standard Sterling Supreme Gummed Tape the highest of all brands.

First, the kraft purchased from the world's finest mills must pass 18 tests in our laboratory. Then it is gummed and processed on the industry's most modern equipment with up to 7 tests of the glue, 3 of the materials while in process, ending with 18 different

tests of the finished tape—46 in all.

Add to this our experience gained from 39 years in the gumming business, all of which combine to give you our super-standard—Sterling Supreme Gummed Tape.

Your nearby paper merchant who handles Sterling Supreme, is your reliable source for all top quality paper products.

Sterling Supreme costs less in the most important place—the Shipping Room!

*A complete list of the 46 tests will be supplied on request.

THE GUMMED PRODUCTS COMPANY

TROY, OHIO—Sales Offices in principal cities

The Gummed Products family... Sterling Supreme Gummed Tape, Trojan Imperial Gummed Tape, Lashin Tape, Jet Tape, Card Tape, Tre-Band (Banding Tape), Gummed Printing Papers, Laminated Foils and Papers, Box Tapes and many other specialty products.

METAL EDGE

pays packaging dividends
in 3 typical industries

SLASHES AIR FREIGHT COSTS!

"Overseas air shipments of condensers and resistors using metal boxes was too costly. Now light-weight M.E. boxes give us full protection... cut shipping container and freight costs by half!"



SIMPLIFIES DEALER HANDLING!

"M.E. boxes make stocking and selling universal joints easier for our dealers. Boxes never bulge or collapse—save storage space. Large part numbers simplify identification!"

SURVIVES NATION'S BIGGEST FLOOD!

"Ordinary boxes fell apart, but M.E. boxes—with reinforced corners and no adhesives—survived 18 feet of water—saved thousands in reclaiming aircraft parts. Now M.E. packaging is standard procedure!"



METAL EDGE—the engineered method—has solved diverse packaging problems in over 100 American industries.

NATIONAL METAL EDGE BOX CO.

PACKAGING • MATERIALS HANDLING • INVENTORY CONTROL

334 North 12th Street, Philadelphia 7, Pa.



Plants and people

ritory, which is now directed by A. L. Mix, made acting district manager.

Alexander Calder, president and chairman of the board of Union Bag & Paper Corp., recently celebrated his 40th anniversary with the company.

His associates in the company commemorated the occasion by presenting Mr. Calder with a grocery bag sheathed in bronze and mounted on a black marble base representing the 258,000,000,000th paper bag produced by Union during Mr. Calder's affiliation.



A. Calder

F. Edward Watermulder has been elected treasurer of the Jacques Mfg. Co., Chicago.

Bemis Bro. Bag Co., St. Louis, Mo., has consolidated into one administrative unit its New York Sugar Bag Sales Div. and the New York General Sales Div., to be known by the latter title. R. Highley has become administrative assistant to F. V. Deaderick, director of Eastern operations, and F. L. Munger has been appointed sales manager of the combined division. J. G. Barnes, manager of New York Sugar Bag Sales since 1941, will retire.

The company is constructing a new building in Memphis, Tenn.



R. R. McNamara

R. Reid McNamara, general sales manager of Sealright Co., Inc., Fulton, N. Y., has been placed in charge of all company sales activities. He succeeds J. L. Dolphin, recently deceased. Mr. McNamara will continue as general sales manager.

Clarence Snyder, chairman of the board of Snyder Tool & Engineering Co. and its subsidiary, Arthur Colton Co., Detroit and Mancelona, Mich., died at his winter home in Ft. Lauderdale, Fla., on Jan. 4, at the age of 72. Mr. Snyder organized Snyder in 1923 with the assistance of Fred Fisher and specialized in designing and building high-production machines for the automobile and other industries.

Alan E. Pradt, 53, advertising manager of the Rhineland Paper Co., Rhineland, Wis., died suddenly of a coronary occlusion at his home on Jan. 23.

LOWER
initial investment
LOWER
operating cost

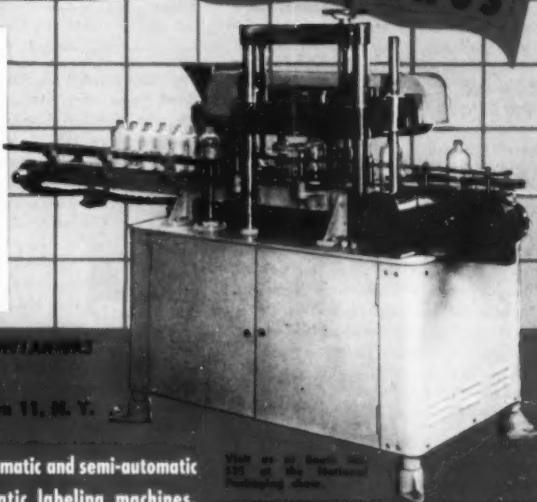
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fully automatic
**Labeling
Machines**

Here is the first **LOW COST Labeler**

that provides greater labeling production with perfect registration. No operators required and its simplicity of design permits unskilled help to service it when necessary.

Changeover time at absolute minimum. Handles containers from fractional ounce to gallon — label sizes from "postage stamp" to 5" x 6". Production capacities from 20 to 150 per minute. Models for front or front and back labeling. Send for literature.



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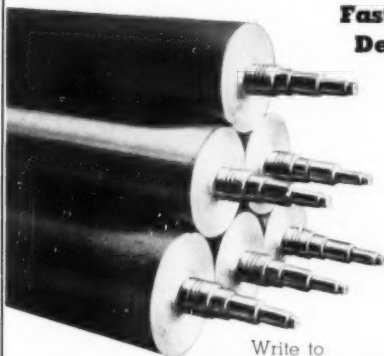
Manufacturers of a complete line of fully automatic and semi-automatic liquid filling equipment and fully automatic labeling machines.

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For your information

Robert de S. Couch of General Foods Corp., president of the **Packaging Institute**, announced the annual spring luncheon of the Institute will be held during the Packaging Exposition, Chicago, April 20, at the Furniture Club. All who are interested in packaging are invited to the luncheon which will begin 12:30 on Monday, the first day of the exposition. Featured speaker will be **F. S. Leinbach** of Riegel Paper Corp., general chairman of the Technical Committees. An announcement of the newly created Package Printing Division will be made by **E. H. Balkema** of Colgate-Palmolive-Peet Co., chairman of new Division of Technical Committees. Meetings of several of the Technical Committees will be held during the early afternoon. Tickets, limited to 200, are priced at \$3.75 and are available from the Packaging Institute, 342 Madison Ave., New York 17.

J. Kingsley Gould, executive director of the **Point-of-Purchase Advertising Institute**, has announced a three-day Exhibit and 7th Annual Symposium at the Palmer House, Chicago, March 31 to April 2. **Paul Godell**, vice president of the Arvey Corp., will act as general chairman. Some 10,000 sales, advertising and administrative executives from all over the country who are buyers and users of store displays are expected to attend the exhibition. The latest sales-building devices now being used by large national advertisers at the retail level will be revealed at the Exhibit. Attendance at the annual symposium-luncheon in the Palmer House Grand Ballroom, Wed., April 1, is expected to reach 1,300.

At the annual meeting of the **Gravure Technical Assn.** in Chicago, **John E. Hazel** of the New York News was elected president to succeed **Len S. Pinover** of Intaglio Service Corp. **R. H. Prew** of Nashua Corp. was elected vice president; **Frank A. Sportelli** of International Color Gravure, secretary-treasurer; and **Edward S. St. John** of Halpin, Keogh & St. John, assistant secretary.

All available display space at the **National Materials Handling Exposition**, Convention Hall, Philadelphia, May 18-22, has been assigned, according to **Clapp & Poliak, Inc.**, exposition management. A total of 284 companies will exhibit and thousands of new models of materials-handling equipment will be on display. It is reported that the show will be the largest capital-goods exposition to be held anywhere in the country during 1953 and

the largest ever held in Philadelphia. Advance registration cards and information may be obtained from **Clapp & Poliak, Inc.**, 342 Madison Ave., New York.

The 11th annual meeting of the **Waterproof Paper Mfrs. Assn.**, held recently in Chicago, established new attendance records in that the greatest



Mr. Norstrand

number of individual companies of the industry were represented from practically every section of the country. **Leif B. Norstrand**, president of Specialty Convertors of East Braintree, Mass., was elected president, succeeding **Charles Wood**, president of Simplex Paper Corp. **David E. Ryan** of the Edgewater Paper Co. was chosen vice president and **Philip O. Deitsch** was re-elected administrative officer. The new president designated **Robert H. Wood** of Simplex Corp. as chairman of the newly created Crepe Paper Div., with **Fred Shepherd** of the Ruberoid Co. serving as vice chairman. The new board of directors includes: **H. A. Anderson**, The Sisakraft Co.; **S. A. Feely**, Keystone Roofing Mfg. Co.; **S. E. Griffiths, Jr.**, National Waterproof Papers, Inc.; **J. D. Johnston**, Union Bag & Paper Corp.; **Fred Shepherd**, The Ruberoid Co.; **A. J. Thiel**, Angier Corp.; **Charles Wood**, Simplex Paper Corp.; **L. R. Watson**, The Tuttle Press Corp.; and **E. A. Skidmore**, Cincinnati Industries, Inc. The association's spring meeting will be held late in May.

A new fully illustrated Point-of-Purchase Reference File on the newest in the corrugated merchandising display field is now available from **Gibraltar Corrugated Paper Co., Inc.**, 8011 Tonnelle Ave., North Bergen, N. J. Examples of point-of-purchase displays and materials for all fields are included.

Henry C. Thorn, resident vice president of the Insurance Co. of America, has been appointed a member of the **Packaging Committee of the Maritime Assn. of the Port of New York** to replace **R. Bruce Miller**, deceased. **W. Irving Plitt** is the newly elected chairman. Mr. Plitt is vice president of the Atlantic Mutual Insurance Co. and has served on this committee since its inception.

Edwin H. Schmitz, president of the **Packaging Machinery Mfrs. Institute**, has announced the program committee for the institute's spring meeting as follows:

chairman, **Herbert H. Weber**, president of H. G. Weber & Co., assisted by Mrs. **Helen H. Fairbanks**, president of Horis Mfg. Co., and **Edwin E. Messmer**, vice president of Ameco Packaging Machinery. **G. Radcliffe Stevens**, president of Elgin Mfg. Co., will be in charge of entertainment. The meeting will be held on April 18-19, the Sheraton Hotel, Chicago.

Dr. Milton E. Parker, director of food engineering at **Illinois Institute of Technology**, Chicago, has announced a 16-week non-credit course in "Food Packaging" at Illinois Tech. The course is being offered as a service to food industries of the Chicago area and their employees. A group of experts from Chicago food corporations, packaging companies and related industries will teach the course, along with Dr. Parker.

Announcement has been made of the appointment of **Stanley Yount**, president of **Southland Paper Converting Co.**, **Alvin A. Abramson**, treasurer of the Central States Paper & Bag Co., and **Arnold Mills**, president of Propack, Inc., as judges for **The Industrial Bag & Cover Assn.'s** annual award for "A Form Fitting Flexible Package for an Article Not Presently Packaged in Bag or Cover Form." The contest is planned to run until Sept. 16, after which the judges will sit as a committee to

What's doing

March 22-24—**Folding Paper Box Assn. of America**, Drake Hotel, Chicago.

March 31-April 2—**Point-of-Purchase Advertising Institute**, Seventh Annual Symposium & Exhibit, Palmer House, Chicago.

April 8-10—**American Management Assn.**, manufacturing conference, Hotel Statler, New York.

April 12-16—**American Supply & Machinery Mfrs. Assn.**, Miami, Fla.

April 15-17—**National Petroleum Assn.**, Cleveland, Ohio.

April 16-17—**Fibre Drum Mfrs. Assn.**, annual meeting, Drake Hotel, Chicago.

April 18-24—**Packaging Machinery Mfrs. Institute**, semi-annual meeting, Sheraton Hotel, Chicago.

April 20-22—**National Packaging Exposition**, Navy Pier, Chicago.

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For your information

judge the various entries on the basis of their uniqueness, simplicity of design, marketability, serviceability and breadth of application. Awards of \$500 for first prize, \$250 for second prize and \$100 for third prize will be presented during the fall packaging show at a date not yet determined. For entry blanks, write The Industrial Bag & Cover Assn., 19 W. 44 St., New York 36.

American Can Co. is now releasing a 41-minute color motion picture of the packaging revolution in America entitled "The Miracle of the Can." The film tells the story of the contribution made by the



Scene from American Can Co. film.

can-making and can-using industries to the American way of life. The movie goes behind the scenes to show the evolution of metal cans from the days of manual production to the modern can-making lines which turn out containers at speeds up to 450 a minute. It depicts the canning industry at the turn of the century when can making was so slow that canneries could not meet the public's demand for canned goods. It also tells how the can-making and can-using industries have opened up vast new markets for the products of American farms, factories and fisheries. The film is available for showing to business, civic, scholastic, industrial and agricultural groups throughout the country on request to American Can Co.

At the recent annual meeting of the Waxed Paper Institute, the Hon. Charles W. Tobey, U. S. Senator from New Hampshire, gave an address entitled "Crime—Public Enemy No. 1." Keynote speaker during the morning session was Robert A. Whitney, president of National Sales Executives.

Technical Release No. 12, a new 16-page publication issued by Bakelite Co., presents the latest technical information on specifications, formulations and uses of Vinylite Resin VMCH as a surface coat-

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Does it have these LUSTEROID Advantages?

Does your package give you:

- MINIMUM WEIGHT
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MODERN PACKAGING

For your information

ing. Addition of plasticizers, stabilizers and solvents and their effects on resin VMCH are discussed. Copies of the release may be obtained from Don Masson, Bakelite Co., Div. of Union Carbide & Carbon Corp., 300 Madison Ave., New York 17.

At a recent meeting of the Seal & Label Institute, J. Kirby Tompkins, president of



Mr. Tompkins

Tompkins' Label Service, was elected president of the association. Other officers elected were: first vice president, Sidney Hollaender of the Ever-Ready Label Corp.; second vice president, Edward C. Long of Shuman Labels; and secretary-treasurer of the group is Frank Baxter.

The 2nd Canadian National Packaging Exposition, sponsored by the Packaging Assn. of Canada, will be held in Toronto, Nov. 3-5, in the Automotive Bldg., Canadian National Exhibition grounds. It is expected that the 1953 exposition will be three times larger than the first show, held last year. The 3rd Annual Conference will be held concurrently. The 1953 exposition and conference will include an exhibit of entries in the competitions to be sponsored in 1953 by the PAC Canadian Package Design Committee, a display of defense packaging by the Dept. of National Defense and an annual meeting of the PAC Technical Committee. A. L. Mitchell of Gair Co., Canada, Ltd., is chairman of the Exhibitors Advisory Committee. General chairman for the exposition is H. S. Romani of Christie, Brown & Co., Ltd., who served in the same capacity at last year's exposition. G. Murray Scott of Dow Chemical of Canada, Ltd., is general chairman of the Conference.

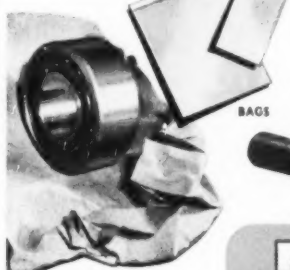
The association has also announced that the first Canadian Package Design Forum, sponsored by the PAC Canadian Package Design Committee, will be held early this year in Toronto. It will be a half-day conference where leaders in the fields of package and label design and container engineering will speak. During the forum, presentation will be made of the Certificates of Award and Certificates of Honorable Mention won by entrants in the 1952 Consumer Package and Industrial Container competitions. The Committee will sponsor these packaging competitions again in 1953.



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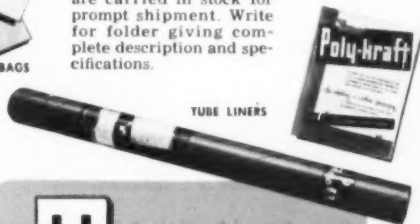
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U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps are not accepted.

Edited by H. A. Levey

Heat-Sealing Device, N. Langer, New York, N. Y. U. S. 2,621,704, Dec. 16. A machine for heat sealing thermoplastic sheets comprising, in combination, a sealing member and a pressure member, said sealing member comprising a layer of electrical conducting material having a first surface constituting a sealing face and a second surface separated from the first by the thickness of said layer, and means for producing a pulse of electrical current in layer of the sealing member.

Container, R. F. Reifers, Chicago, Ill. U. S. 2,621,782, Dec. 16. A container comprising a circular top and bottom member, said bottom member being made of flexible material, annular flanges formed in the peripheries of members, telescopically connecting said members together.

Medicament or Cosmetic Applicator Package, S. van Botham, Hollywood, Calif. U. S. 2,621,784, Dec. 16. An applicator package, comprising an envelope consisting of a single sheet of foldable, fusible material doubled upon itself, with portions of the material adjacent the contiguous edges of the opposite sides of the envelope separably fused together; and a foldable applicator pad of absorbent material doubled upon itself within said envelope.

Dispensing Container for Labels and the Like, W. R. Harris, Elkins Park, Pa. U. S. 2,621,787, Dec. 16. In a dispensing container of paperboard having opposite pairs of exterior side-wall panels and exterior end-wall panels and a slot in one of side-wall panels of one of pairs for the outward passage of articles disposed in a stack in the container.

Pocket Tissue Package, G. C. Hitchcock, Peterborough, N. H. U. S. 2,621,788, Dec. 16. A pocket tissue package comprising a flat-sided, relatively thin carton having closed top, bottom, side and end walls of flexible sheet material, the top having weakened lines extending outwardly from its central region to one end wall of the carton at points remote from the adjacent side walls thereof and joined across end wall, thereby defining a detachable window section, which when manually removed provides an opening through portion of top.

Method of Labeling Containers, L. M. Perry (to Nashua Corp., a corporation of Massachusetts). U. S. 2,621,823, Dec. 16. The method of attaching labels to containers by means of a heat-activatable adhesive coated on the back of the label throughout its area, which comprises activating the coating to cause it to become adhesively tacky, then securing the label to the container by such adhesive in at least a portion of the area, thereafter humidifying the body of label to soften and to provide for expansion of the same and then pressing the label into intimate contact with the container throughout the entire area of the former while the coating is adhesively tacky.

Metallic Can, H. Sebell (to Reynolds Metals Co., Richmond, Va.). U. S. 2,621,826, Dec. 16. A can comprising a can body having an open top and an internal bead adjacent top, and a closure element for closing open top, said closure element being made of a thin soft metal which can be easily severed without being provided with a score line and which of itself does not possess the rigidity required of a replaceable cover for closing the open can.

Container Having Integral Tear Strip, F. F. Osmer, Maywood, N. J. U. S. 2,621,828, Dec. 16. A cylindrical container comprising a tubular body and top and bottom members sealing said tubular body, a tearing strip in said tubular body near the top thereof and adapted to be engaged by a key and wound thereon for removal of the tearing strip.

Container Closure, M. Friedman, High Point, N. C. U. S. 2,621,832, Dec. 16. A dispensing container and adjustable closure thereof comprising a container having a cylindrical neck provided with external screw threads, an outwardly extending

annular shoulder on neck adjacent lower extremity of threads and an upwardly extending reduced neck portion providing a dispensing opening, with a closure for said opening comprising a cylindrical member having a restricted dispensing aperture centrally located in upper end.

Receptacle, D. D. Eklund, Council Bluffs, Iowa. U. S. 2,621,833, Dec. 16. In a dispensing container, a bottom cup portion, an elongated cylindrical member detachably extending into and to the inside bottom of first-mentioned member, frictionally engaging the same and having its top closed.

Filled Can-Handling Apparatus, J. Simpson (to Continental Can Co., Inc., New York, N. Y.) U. S. 2,621,841, Dec. 16. The combination of the rotary turret of a machine for filling cans whereon the cans are arranged in equidistant and closely spaced relation, the rotary turret of a closing machine whereon the cans are to be closed after being received in equidistant and widely spaced relation.

Foil Feeding and Embossing Mechanism for Bottle-Capping and Like Machines, N. V. Burdin (to Scots Engineering (Newport Ltd., Newport, England)). U. S. 2,621,842, Dec. 16. Improvements in bottle capping and like machine comprising in combination, a capping head, a body part slidably mounted in respect to said capping head and in alignment therewith, through which foil for forming the caps is adapted to pass, an embossing die mounted in body part, and a plunger mount in body part adapted to cooperate with embossing die to emboss the foil, and having a cam-operated linkage which is adapted to reciprocate the body part to feed the foil to the capping head.

Machine for Filling Cans, D. M. McBean, L. C. Tallman and R. E. Moyer (to McBean Research Corp., Rochester, N. Y.). U. S. 2,621,844, Dec. 16. A machine for packing foodstuff into cans, comprising a filling nozzle, a hopper communicating with nozzle to supply foodstuff thereto, a gate for closing nozzle, a rotary worm for feeding foodstuff from the hopper into the nozzle and against the gate to compact the foodstuff in the nozzle, an indexible head, a plurality of volumetric containers mounted on head, each of which is adapted to hold a canful of foodstuff.

Ventilated Container, A. J. Stefanich, Fresno, Calif. U. S. 2,621,847, Dec. 16. A ventilated container comprising substantially rectangular wooden end members, each having a bottom edge, opposite erect side edges and a top edge; a single sheet of fibreboard material interconnecting the end members and secured to the bottom edges and side edges thereof.

Partitioned Carton, R. M. Bergstein, Wyoming, Ohio. U. S. Re:23,597, Dec. 23. A partitioned carton comprising a box-board blank adapted to be tubed, having a plurality of body walls in articulation and a glue flap at one end, closure elements articulated to at least one of body walls, one of said body walls constituting a top wall having partition elements formed therein.

Closure for Opened Ends of Wrapped Bread Loaves, V. D. Kissig, West Los Angeles Calif. U. S. 2,622,760, Dec. 23. In a closure for the opened end of a wrapped bread loaf, a pair of closure sections, each including an end wall and a flange extending around three sides thereof, leaving a fourth side open and bordered by a free edge on end wall, one of end walls having along its free edge a hinge trunnion and the other having along its free edge a hinge channel receiving hinge trunnion and embracing same so as to prevent separation of the sections radially with reference to the hinge axis.

Disposable Carton Mold Box for Frozen Confections, W. Hammond, Salt Lake City, Utah. U. S. 2,622,784, Dec. 23. A disposable cover for the box proper of a mold used in the production of frozen food confections on sticks, comprising a cover panel, closure flaps extending from cover panel and arranged to overlap the mold box proper, exteriorly thereof, said cover panel being provided with a plurality of substantially closed perforations bordered by depressible flap members.

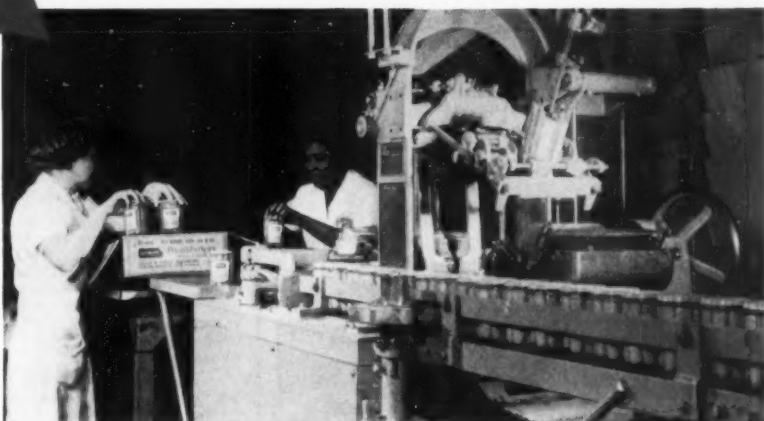
Siftproof Automatic Bag and Method of Making, W. I. McDowell (to Benj. C. Betner Co., Devon, Pa.). U. S. 2,622,786, Dec. 23. A bag formed from a two-ply gusseted tube, the inner surfaces of the inner ply being sealed around their inner

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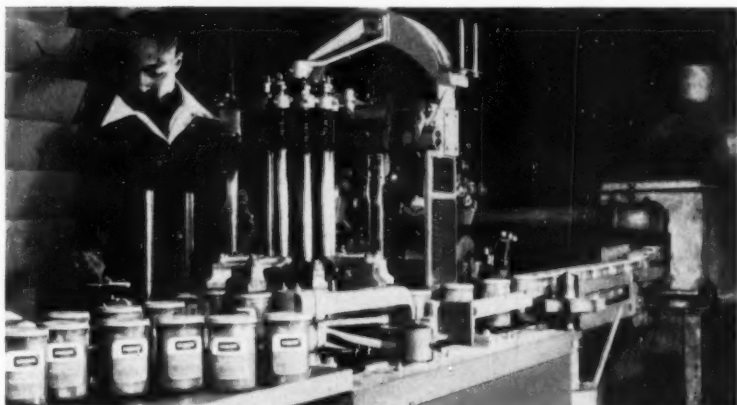
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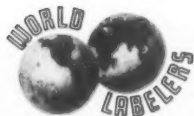


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U.S. patents digest

periphery adjacent the bottom end to form an H-shaped, fin-type seal, said bag having a pre-formed, rectangular bottom folded against one wall of the tube along a line extending transverse the bag and parallel to the median line of bottom.

Coffee-Cream Package, J. E. Snyder and B. J. Avant (to Wing-foot Corp., Akron, Ohio). U. S. 2,622,986, Dec. 23. A coffee-cream package having an individual serving of coffee cream therein, the package being formed of a container composed of a bag of oil-resistant, heat-sealable plastic film and a fibrous cellulosic stiffening element, walls being united by a heat seal.

Container Closure and Applicator Device, L. A. Sherry, New York, N. Y. U. S. 2,623,228, Dec. 30. A container closure and applicator device comprising a top panel having an applicator hinged to its bottom, with a spring biasing it to swing downwardly therefrom and a releasable catch for restraining it from so swinging with said applicator, comprising a lever having an elastic absorbent element on its side.

Bag-Making Apparatus, A. G. Rose and J. A. Gilbert (to Rose Bros. (Gainsborough) Ltd., Gainsborough, England). U. S. 2,622,441, Dec. 30. In a bag-making apparatus wherein a web of wrapping material is formed about a suitable former into a continuous tube with the edges of the web overlapping to form a longitudinal seam, a bag end-forming mechanism comprising in combination a pair of opposed, transversely movable sealing members, normally arranged one on each side of the path of the tube, and having means for severing the tube transversely to form a completed bag.

Box-Partition-Forming and Inserting Machine, J. B. Thaxton (to Paper Package Co., Indianapolis, Ind.). U. S. 2,623,442, Dec. 30. In a machine for forming and inserting partitions in boxes, a supply stack of box partitions, a suction-type forming head, a forming plate associated therewith, a suction-type inserting head and means for advancing and registering boxes in alignment with same inserting head.

Method of Making Lined Lapped-Seam Fibre Containers, C. E. Maier, F. L. Mimmear and H. E. Brockett (to Continental Can Co., New York, N. Y.). U. S. 2,623,444, Dec. 30. The method of forming a fibre lap-seam container body consisting in superimposing a continuous web of lining material on a continuous web of fibreboard in which the machine direction of the board extends parallel to the axis of the container body, one of which webs has applied thereto a stable non-brittle adhesive, the respective widths of said webs being such that the lining web will project beyond the side edges of the body web, progressively folding the projecting portions of the lining web about the edge portions of the fibreboard web into contact with the opposite face thereof.

Bag-Closing Device, N. P. Priamos, Lynwood, Calif. U. S. 2,623,665, Dec. 30. The combination, with a receptacle having a discharge mouth, of a body disposed within the receptacle mouth and completely filling and closing the same, a member slidable transversely of the mouth and gripping the body from opposite sides and clamping the material of the receptacle to the body, the body having a material discharge passage there-through leading into the receptacle and removable means closing said passage.

Bag-Filling Machine with Movably Mounted Funnel-Closing Member, R. E. Firestone, Troutville, Va. U. S. 2,623,671, Dec. 30. Dispensing apparatus comprising a tubular funnel generally tapering in a downward direction and terminating in a mouthpiece adapted to enter a bag.

Banding Machine, J. H. Holstein, Fresno, Calif. U. S. 2,623,673, Dec. 30. A banding machine comprising a bottle support, a floating mandrel adapted threadedly to receive thereover a continuous supply of tubular banding material, means holding the mandrel in an erect position above the bottle support and means elevationally reciprocating periodically the bottle support and the mandrel-holding means relative to each other.

Method of Applying Closures to Containers and Closure Blanks Thereof, J. W. Thomas (to the Aluminum Co. of America, Pittsburgh, Pa.). U. S. 2,623,674, Dec. 30. A method of forming a closure on a container, comprising the steps of forming a closure blank having a diaphragm, a relatively short skirt portion depending from said diaphragm and a relatively long skirt portion extending immediately upwardly from said relatively short skirt portion, placing said closure blank on a container.

Pan-Filling Machine, M. W. Baker, F. F. Beil, C. F. Curtis, II, and E. A. Patton (to Curtis Companies, Inc., Clinton, Iowa). U. S. 2,623,675, Dec. 30. Apparatus for delivery of flowable granular material to containers, having a substantially flat bottom apparatus, comprising a hopper to hold material and having a discharge aperture.

Pan-Filling Machine, M. W. Baker and F. F. Beil, C. F. Curtis, II, and E. A. Patton (to Curtis Companies, Inc., Clinton, Iowa). U. S. 2,623,676, Dec. 30. Apparatus for delivering granulated material to containers having a substantially flat lower surface, comprising an upper belt conveyor having an upper and a lower reach, with lower conveyor extending beyond one extremity of said upper conveyor belt in direction of movement of the upper reach of upper conveyor.

Shipping and Display Package, E. B. Candell (to General Electric Co., a corporation of New York). U. S. 2,623,682, Dec. 30. A packing and display container comprising, in combination, a carton and a tray within said carton, said tray having a platform for supporting articles in spaced relation to carton walls.

Partitioned Carrier and Method of Making It, W. A. Ringer (to Gardner Board & Carton Co., a corporation of Ohio). U. S. 2,623,683, Dec. 30. A method of forming one-piece knock-down carriers which comprises providing a blank having an elongated hand portion with a glue flap at one end, hand portion being of a length to surround an assembly of articles and to form side and end-wall portions thereabout.

Carton, P. C. Collura (to the Container Corp. of America, Chicago, Ill.). U. S. 2,623,684, Dec. 30. A collapsible carton comprising a tray portion having a bottom, a front and a rear wall hinged to the front and rear of the bottom, side walls hinged to the sides of the bottom, a gusset portion integral with and hinged to the rear edge of each side of the rear wall, gusset portions being creased so as to lie against the inner side of the rear wall when the rear wall is raised to a position normal to that of the bottom.

Method of Making Paper Bags, W. H. Bryce (to Dixie Wax Paper Co., Dallas, Tex.). U. S. 2,624,246, Jan. 6. The method of manufacturing paper bags from a single sheet which consists in wax coating the medial section of said sheet to render the same highly transparent and coating the remaining sections of sheet with a rubbery wax composition to reinforce same.

Light-Sensitive Control for Setting-Up Machine, C. L. Claff and C. A. Moeller (to Norfolk Paper Co., Inc., Randolph, Mass.). U. S. 2,624,247, Jan. 6. Control mechanism for the pressure members of a box-setting-up machine having a pair of aligned light passages through the pressure members, a one-revolution clutch and a tripping device therefor.

Blank-Feeding Mechanism for Folding-Box Machine, T. R. Baker and E. J. Pagendam (to Bemiss-Jason Machine Co., San Francisco, Calif.). U. S. 2,624,249, Jan. 6. A feeding mechanism for removing single blanks of foldable sheet material from a withdrawal position and plane, for example, from the end of a stack of blanks and moving the withdrawn blank to and depositing it in a deposit position and plane.

Package Dispenser, H. P. Compton, Abilene, Tex. U. S. 2,624,648, Jan. 6. A package-dispensing machine comprising an upright housing, an inner bottom in said housing above the lower end thereof, a plurality of upright partitions between said inner bottom and the top of said housing, inner bottom having a forwardly extending slot between each pair of partitions and also having an elongated longitudinal slot disposed at right angles to said first named slots, and a delivery receptacle slidably carried by housing at one end of longitudinal slot.

Bottle Carrier, J. A. Lamprecht, Cranford; N. J. U. S. 2,624,498, Jan. 6. In a sheet-metal bottle carrier, the combination with bottom, side and end walls, of a separator, each of said side and end walls being formed with inwardly displaced straps for anchoring the separator, and the separator including a central body portion and a partition forming side arms disposed at opposite sides of the body portion and integral therewith.

Container Having Wax-Product Coating, S. W. Ferris (to Sun Oil Co., Philadelphia, Pa.). U. S. 2,624,501, Jan. 6. A hydrocarbon paraffin wax derived from petroleum, having a melting point of from 125 to 132 deg. F., and coating a container for packaging milk formed from a fibrous sheet material with said liquid-resistant coating.

Merchandising Package, G. L. Evans (to Glen L. Evans, Inc., Caldwell, Idaho). U. S. 2,624,502, Jan. 6. An elongated container consisting of a single piece of resilient, transparent plastic material comprising a back panel and a returning flap forming a closure panel extending across the side of the container.

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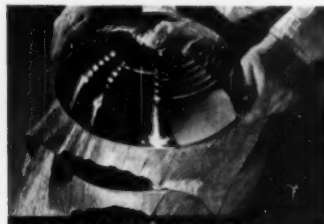
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British exposition reveals new interests

At the Packaging Exposition held in London, England, in January, 1953, exhibits which apparently attracted the widest attention, according to reports, were those in the fields of heat-sealed packaging and of thermoplastic and pressure-sensitive package closure and labeling.

The application of transparent and printed heat-sealed packages is said to have made "tremendous strides" in British merchandising. Hypodermic syringes, small saw blades and ice-cream spoons, as well as many small items such as buttons and pins usually sold on cards, were shown in heat-sealed packages. Strip packaging of tablets and pills was demonstrated at the exposition by a new 250-tablet-per-minute unit. Powders and liquids in heat-sealed foil and film packages were also exhibited and the idea of a pocket-size packet holding a single nip of whiskey was thought to be under serious consideration.

A unit described as the first British thermoplastic permanent labeling machine, shown at the exposition in London, was designed primarily for the paint industry, but is described as suitable for any over-all or positioned labeling on glass or metal. Labels used are printed on stock pre-coated with a thermoplastic adhesive. A unit rated at 30 or 60 containers per minute (using either single or twin labeling heads) was said to have a register accurate to within one-hundredth of an inch. A variation of this thermo-adhesive labeler is designed to affix colored slips into blanks on lithographed paint cans.

A pressure-sensitive-bag closure technique worked out by one British firm attracted considerable attention at the exposition, where it was revealed that the method had been successfully applied both for mass-production packaging and for retail-store package closure. Basis of the system is the use of a latex dry sealing adhesive on two points of the bag or container, so that when the top of the bag is folded over and hand pressure is applied, a positive bond is formed.

Tubes of printers' ink protected by two-part molded-pulp containers inside an outer sleeve were exhibited in London, where it was said that this form-fitting protective package solved a serious problem for firms supplying ink to users who extract ink by vacu-

um. The vacuum-extraction method requires that the tube reach the user without ridges or deformations. Other applications of molded pulp shown were protective packages for special decorative Coronation Year food containers and items such as loving cups, etc.

Insistence by many large firms on palletized shipment prompted British designers to offer small firms, who must comply with this demand, a foot-pedal-powered fork lift truck. Actual hoisting is done by power, however. The unit with 1,000-lb. capacity is reported to cost 50% less than a similar fork lift with powered drive wheels.

Several machines for counting and filling tacks, nuts and bolts and similar small objects shown at the exposition applied a combination of hydraulically operated vibratory feed and photo-electric counting. This type of feed, developed for the food, confectionery and fruit trades, is said to be growing in popularity for packaging small, irregular objects such as hardware. Electronic-control features were also noted on a number of packaging machines of various types which were exhibited.

British package-machine designers' work at the exposition was said to reveal a current tendency toward simplicity of operation, durability and low cost, in a reversal of a previous trend toward the addition of new features of greater complexity. At the same time, a number of machine manufacturers were said to be avoiding patenting their machines. "Policy now is to develop a unit, mass produce it in the simplest and cheapest form and then move on to something new and possibly quite different" was the way one report phrased the attitude of these firms. Firms following this marketing technique are reported to describe patenting as "slow, costly and of limited value for only a limited period."

Additional new developments seen at the London Packaging Exposition included internal protective coatings for non-ferrous metal containers, new protective packaging papers, a new acetate film suitable for laminating to paper for a waterproof finish, and new sealing machines for applying tape seals to packages. Printed and waterproof corrugated board was also shown.

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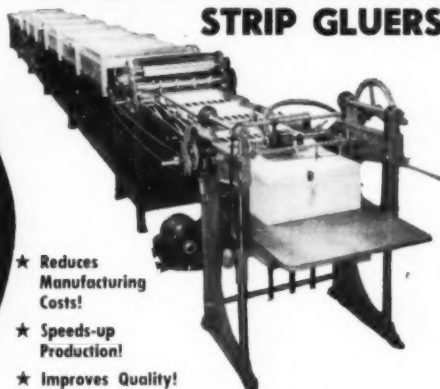
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Minute Maid

(This article continued from page 91)
the ordinary. The mass of oranges suggested similar treatment for the other types of citrus juice concentrates in the Minute Maid line.

To provide family similarity of the packaging, a broad white band was adopted to encircle the middle of the can. On this surface was placed bold, easily recognized sans serif type to give brand and product name. An oblique color patch printed across the lower portion of the band on the face of the package gave the volume of juice that could be made from the can by adding water—1½ pints. Within these elements color and fruit illustration became the signature for each Minute Maid product. In mass display the Minute Maid juice cans make a brilliant and attractive kaleidoscope of fruit colors and patterns all related by the familiar brand name on the broad center band.

The choicest fruit was selected and photographed in full color by one of the country's leading photographers for the reproductions and every attempt was made to achieve the most realistic effects on the lithographed cans. Colors were all selected to provide the neatest and most sensitive contrasts with other elements on each label and to provide a harmonious effect in mass display. Lithographed tops and bottoms of the cans also added color and increased brand recognition.

The most simply worded instructions in one-two-three step form tell the user how to store, add water and mix the juice on the neat, compact side panels. The new Minute Maid personality was applied to all sizes of packages besides the 6-oz. can, the 4-oz. small-family size, the 12-oz. economy size and the 32-oz. institutional size. It has provided a distinctive package to display widely in all promotional material—point of sale displays, advertisements, trucks, etc., so that the Minute Maid package has become the most distinctive and familiar in its field. Minute Maid gives much credit to the individuality of its package for its meteoric rise to fame.

Always on the alert to the influence of the package on sales in this day of self selection, Minute Maid also took the lead in using the package to make a gesture to the children's market. Lemonade has been merchandised primarily to youngsters through

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such media as the Gabby Hayes television show on NBC-TV and through a unique lemonade-stand kit premium. With the child's world in mind, the company put on the lemonade can a typical kid's lemonade stand topped with a bright beach umbrella. The orangeade can features a circus scene with clowns and elephants. General format and typography of the labels, however, carry out the unmistakable Minute Maid family idea.

The development of frozen concentrated citrus juice is one of the outstanding achievements in food technology of the post-World War II years and once again a package form, new to its field, helped lead the way to the whirlwind success. To Minute Maid go the top honors for trail blazing this phenomenal development.

CREDITS: Cans and sealing equipment, American Can Co., 100 Park Ave., New York, and Continental Can Co., Inc., 100 E. 42nd St., New York. Filling equipment, The Pfauddler Co., 1000 West Ave., Rochester 3, N. Y.; Food Machinery & Chemical Corp., Canning Machinery Div., 333 W. Julian St., San Jose 6, Calif. Case loaders, Standard-Knapp Div. of Emhart Mfg. Co., 127 Main St., Portland, Conn.; A-B-C Packaging Machine Corp., 102 S. Front St., Quincy, Ill.; J. L. Ferguson Co., Route 52 at Republic Ave., Joliet, Ill.; Chisholm-Ryder Co., Inc., College Ave., Niagara Falls, N. Y. Corrugated shipping containers, Container Corp. of America, 38 S. Dearborn St., Chicago 3, Ill., and Kickhefer Container Co., P. O. Box 710, Camden, N. J. Label designers, Paxton, Krueger & Associates, Inc., 6 E. 46 St., New York. Glass juice mixer, Thatcher Mfg. Co., Elmira, N. Y. Plastic juice mixer molded by Tupper Corp., Farmingdale, Mass., of Bakelite polyethylene.

CORRECTION

Due to a mechanical error in our Manuscript Typing Dept., the identification of Federal Adhesives Corp. as the supplier of adhesives for Mueller Macaroni Products packages was omitted from the Packaging's Hall of Fame story in the February issue. The adhesives used have played a particularly important part in the success of these packages and we deeply regret our failure to give proper credit to the supplier. Federal Adhesives Corp. is located at 210 Wythe Ave., Brooklyn 11, N. Y.

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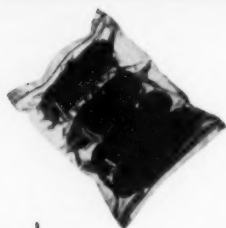
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* Patented process manufactured under one or more of the following patents: 2,460,460; 2,369,439; 2,374,094; 2,374,095



17 Williams Avenue Brooklyn 7, N. Y.

Vending-machine sales

Packaged products distributed through vending machines grossed \$1,371,000,000 during 1952, with cigarettes and candy bars the dollar-volume leaders, according to the annual census of the vending-machine industry compiled by *Vend* magazine, the industry's business paper.

For the second consecutive year, biggest proportionate gains were made by machines selling hot coffee and ice cream. But substantial increases were noted in candy, gum, nuts, cigarettes and soft drinks, the backbone of this retailing method. Hot-coffee machines nearly doubled during 1952, while ice-cream machines on location expanded from 12,325 to 16,075, the magazine reported.

Candy venders, the census disclosed, vended 4,338,322,560 nickel and dime bars. Lion's share of the total grossed by the automatic merchandising industry was accounted for by 473,770 cigarette venders which sold a total of 2,980,960,840 packs of cigarettes at an average price of 24.1 cents. As of Jan. 1, the magazine reported, there were 23,000 cigar venders and 530,600 bottle-beverage venders, as well as machines to vend a variety of products such as pencils, combs, etc.

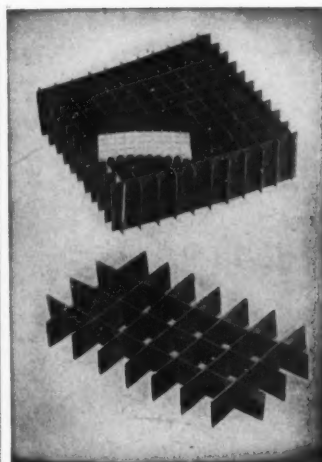
Vacuumized dills

(This article continued from page 79)

number of flexible vacuum packaging machines on order, it is doubtful if similar methods can be adopted immediately throughout the trade.

The vacuum package not only provides a convenient way of marketing genuine dill pickles of assured quality and uniformity, but due to the superior properties of the package extending the life of the product, it may permit an extension of the marketing season. Heinz does its dill curing at the height of the cucumber season in the fall. Its policy has always been to see the fall-cured dills in barrels before the following May. After that, the dills are withdrawn from the market until the new crop is cured. The vacuum package may extend the life of these naturally cured dill pickles to year-around distribution.

CREDIT: Laminated pouches and vacuum-sealing equipment, Standard Packaging Corp., 405 Lexington Ave., New York 17. Shipping containers, F. J. Kress Box Co., Pittsburgh, Pa.



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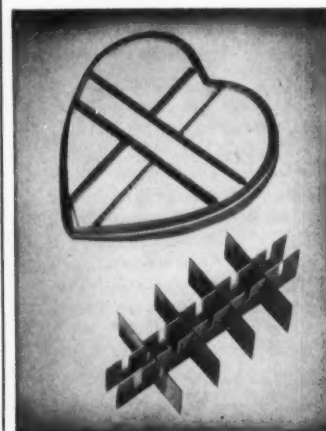
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MODERN PACKAGING

Package hygrometers

(This article continued from page 120) servicing. The sensing elements should maintain their calibration for at least one year. However, excessive dust has a detrimental effect on the elements, generally slowing the response time and/or shifting the calibration slightly. To maintain extreme accuracy, the unit should be recalibrated periodically.

Summary

The package hygrometer is a portable instrument primarily useful in determining moisture conditions existing within low-cost cartons or packages. The multiple-sensing element type is recommended for ease of operation and maximum reliability. The accuracy of 3% relative humidity is maintained without difficulty. The instrument is calibrated for a wide range of temperature and relative humidity, covering most commonly encountered storage conditions. The instrument is a useful aid in packaging development and research.

Acknowledgement

The support of the Wright Air Development Center, United States Air Force, in sponsoring this project is gratefully acknowledged.

References

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Variety-store awards

Seven packages winning the Gold Award in the recent 17th Annual \$5 to \$5 Variety Packaging Competition sponsored by *Variety Store Merchandiser* are: Household and Hardware Division—Holiday Stainless Steel Cookie Cutter Set of Aluminum Specialty Co.; Hardware and Electrical Division—Reflexite Corp.'s carded Reflecting House Numbers; Stationery Division—American Lead Pencil Co.'s Venus Velvet Pencil Kit; Toys and Games Division—Renwal Mfg. Co.'s Western Shootin' Gun package; Cosmetics & Toilet Goods Division—Lashbrite Mascara package of The Theon Co.; Notions and Related Items—John Dritz & Sons' "Eyelets" package; Miscellaneous and Seasonal Goods Awards—Weston Biscuit Co.'s boxed line of Wafers and Cookies. In addition, 19 entries were chosen to receive the Silver Award.

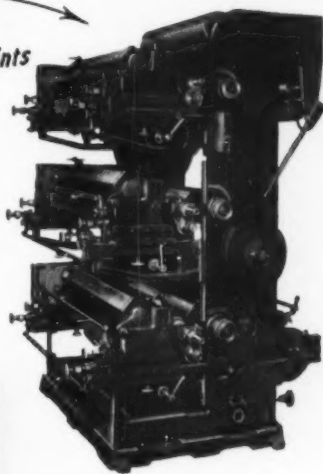
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CARGO AIR EXTRACTOR—For the evacuation of air from barrier bags and moisture, vapor-proof packages. Features positive flow control. A slight pressure of thumb or palm operates air extractor. Instant and easy switch control on nozzle tends to eliminate danger of fracturing the bag and makes extractor readily accessible for operation. Air is extracted rapidly with maximum safety. Completely portable and supplied with casters.



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Increase production, increase shipping efficiency with these efficient packaging aids. Write for complete catalog and prices!

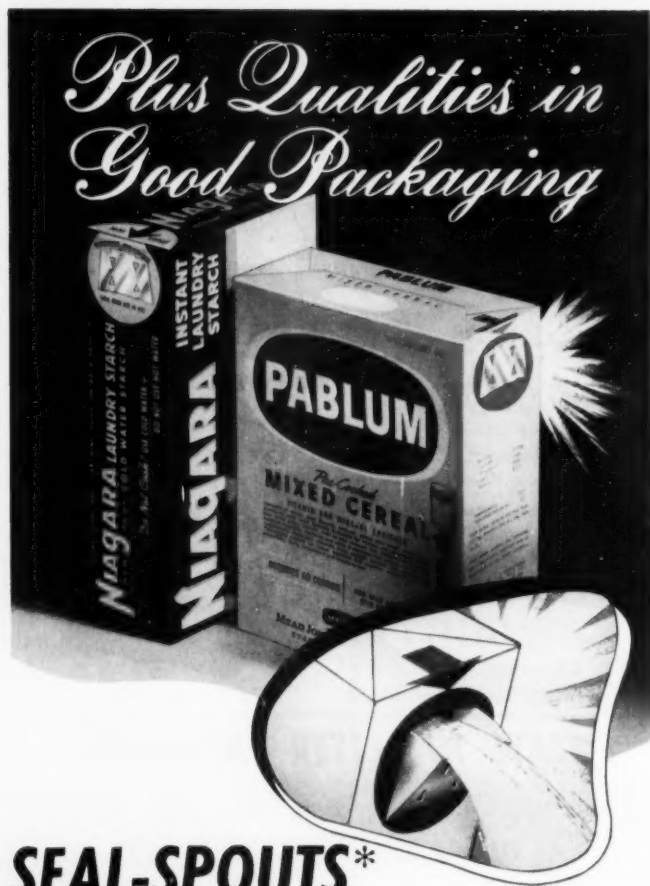
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New vermiculite use

The use of vermiculite as a shock-absorbing material for packing of fragile items has been extended to the hatchery business. Norris Hatchery,



which ships 7,000 to 10,000 turkey-hatching eggs annually throughout the nation, has minimized transit breakage by using vermiculite around the paperboard cup fillers in their wood shipping cases.

Clarence E. Norris, manager of the hatchery, predicts wide usage of vermiculite packing in the hatchery field. The company fills 200-egg wood cases with turkey eggs in cup fillers and then distributes vermiculite around the edges and over the top. "It absorbs all the shock in shipment," Mr. Norris stated. "Where before we averaged five eggs broken per case, none have been broken so far with our new method."

Vermiculite is a mineral ore similar to mica, pulfed by heat into soft, feather-light pellets (see "Vermiculite cushioning," MODERN PACKAGING, June, 1951, p. 80). Being an inert mineral, it cannot rot, burn, deteriorate nor attract mice or termites.

Mr. Norris also pointed out that lightness of the material makes it an inexpensive packing. "Specially important is the fact that this packing will increase hatchability by protecting eggs from sudden temperature changes en route, since vermiculite has high insulating properties," he added.

Box-strength —

(This article continued from page 123)

The second portion of the problem is to determine the combined ring-crush strength of the components of the box and is accomplished by the following settings:

(5) With the indicator set at 792 lbs. on the outer scale (compressive strength of box), arrange the board index of the second largest disk opposite of the B-flute index of the largest disk.

(6) Next, move the box-factor scale

Here's what they say:

The Sales Manager:

From the point of view of building sales volume, it pays us to have the finest packages and displays we can get. That's why I always call on Chaspec.

The Advertising Manager:

The attention-commanding point of sale aids we get from Chaspec tie in beautifully with our national advertising and create a really strong selling stimulus.

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I've always found Chaspec easy and pleasant to deal with. Their prices are most reasonable and their production facilities are tops.

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Chaspec displays have the knack of selling the goods without clogging up valuable counter space. The merchandise they feature moves fast.

For unusual eye appeal
with unusual materials

The Chaspec Manufacturing Company
since 1920
Greenwich, Connecticut

three dimensional displays • moulded plaques
point of sale merchandisers • leather cases
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CHASPEC

so that 0.68 is aligned with the hair-line of the indicator.

(7) Move the box-perimeter scale until 48 in. on that scale coincides with perimeter index of the box-factor scale.

With the disks thus arranged, 43.5 lbs. may be read at the component crushing-strength index of the middle disk.

Any combination of paperboard sheets that can be put together in a B-flute board to give a combined crushing strength value of 43.5 lbs. will satisfy the requirements. Part of the solution to the problem is shown on the calculator of Fig. 1.

Further, similar manipulations of the calculator show that the 792-lb. test box could be attained with a solid fibreboard box in which the load is perpendicular to the machine direction, a C-flute corrugated box and an A-flute corrugated box. For these boxes the combined crush values would need to be 47.0, 38.0, and 35.0 lbs., respectively.

Directions and copies of the disks for assembling the calculator may be obtained by requesting Forest Products Laboratory Report No. D1911-A.

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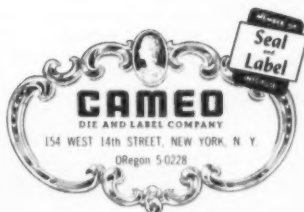
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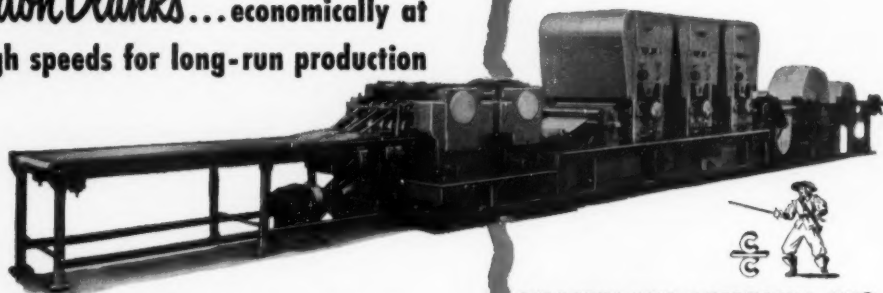
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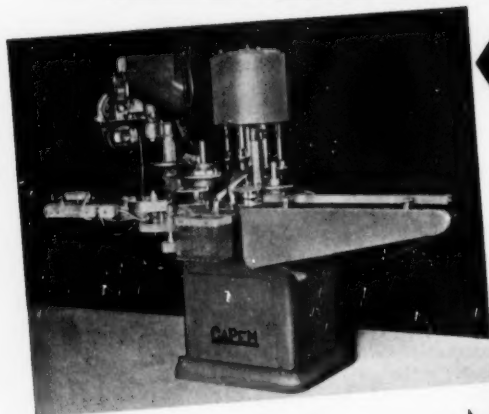
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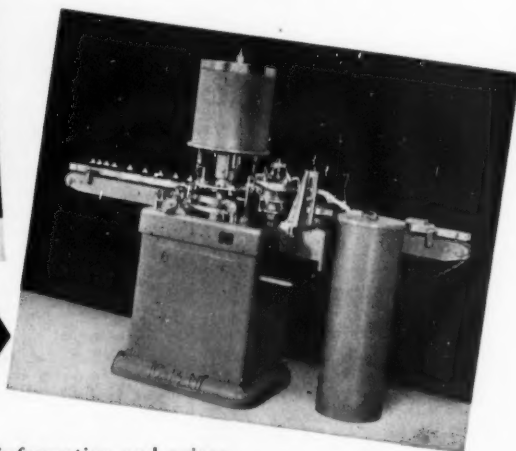
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N.A.T.O. packaging

Special measures are being taken to assist the N.A.T.O. countries of Europe to comply with U. S. Armed Forces protective packaging specifications. The primary difficulty arises from the European shortage of barrier materials, particularly the specialized water-vaporproof films, foils and laminations which have come into existence specifically for military packaging. These materials are required by N.A.T.O. countries supplying military stores for the U. S. Armed Forces under the current U. S. A. Off-Shore (Defense) Procurement Scheme.

The secondary problem arises from the fact that the European countries are turning to Britain for these packaging materials. British suppliers are in general familiar with the requirements as a result of wartime cooperation with the U. S.; in fact, many of the specifications were jointly developed by the two countries. However, it has been necessary to acquaint British suppliers with the details of the current situation. For this purpose, representatives of about 40 British trade organizations recently gathered at the U. S. Embassy in London in a meeting convened by the British Institute of Packaging, where steps were taken which will lead to setting up of a national liaison committee in the United Kingdom. Working through the European office of the Mutual Security Agency, the committee will establish a working liaison between U.K. suppliers and individual contractors and trade groups in the European N.A.T.O. countries involved. Quality inspection will be a matter for particular attention.

During the past year, national liaison committees have been set up in France, Germany, Holland and Italy to acquaint trade groups and individual contractors in these countries with the methods and materials required in packaging supplies under U. S. Armed Forces specifications.

All controls revoked

Last of the control orders affecting the packaging industry have now been revoked by the National Production Authority. Final orders revoked are: M-8 covering tin, M-24 controlling use of tin in the manufacture of tinplate and terneplate, M-25 covering cans, M-26 covering closures and M-27 covering collapsible tubes.



In 1952

SHIPPING LOSSES FORCED DOWN THE PROFITS CURVE OVER \$100,000,000

How much of this huge loss was your Company's? How much more money did damaged shipments cause you to lose last year in goodwill and customers?

You may not even know the figure; shipping losses often hit at a level where management doesn't see them. Management has little idea of the big part faulty package closure plays in causing such losses.

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The use of *Gummed Sealing Tape on cartons is recommended and recognized by all carriers. *Gummed Sealing Tape was proved best in recent exhaustive, impartial tests of the six most widely used closure methods. *Gummed Sealing Tape has been proving this superior performance in actual shipping experience year in and year out.

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We will be glad to send to your shipping head full details about Gummed Sealing Tape, as well as the results of the recent performance tests on the various closure methods. There's a brochure for executives, too, which will interest you. Please check which material you wish. Use the coupon below.

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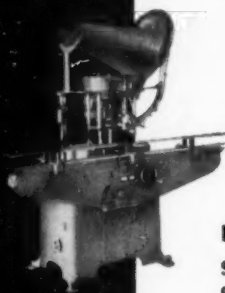
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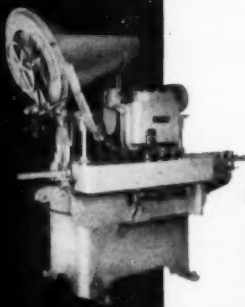


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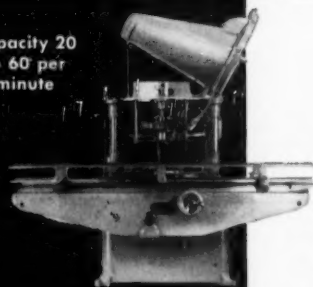


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Packaging show

The many major changes taking place in the packaging field—faster, simpler machinery; new applications of materials; improved methods of production; better testing procedures, and organization and coordination of the over-all packaging function—will highlight the forthcoming National Packaging Conference.

The Conference will be held at Navy Pier, Chicago, April 20-22, concurrently with the 22nd A.M.A. National Packaging Exposition, to be on display April 20-23.

The most current information available on these topics will be presented: new horizons for packaging, organizing and coordinating the packaging activity, testing consumer acceptance of new label design, packaging problems in launching new product lines, characteristics and applications of recent plastic films, packaging of fragile products, reduction of product damage in shipping, measuring materials-handling performance and packaging considerations in converting to self service. Also planned for the three-day meeting is a panel discussion on getting maximum performance from filling equipment, a merchandising session and a session on packing, cushioning, cradling and loading of products.

Last year's record attendance at the Exposition will be exceeded at this year's show, according to all indications. Early last month, exhibit space contracted for had already exceeded by 17% the total area of the 1952 Atlantic City show. In preparation for an expected influx of more than 20,000 visitors to Chicago, the A.M.A. has made special arrangements for chartered buses to stop at all principal hotels in and near the Loop to provide a continual shuttle service to and from Navy Pier.

Several special services will be set up at the Navy Pier to give advice and guidance to exhibitors at the Exposition. The engineering services of a consulting engineer will be available for advice on special loading problems created by the necessity for getting new and heavier operating machinery into the Navy Pier. A special section will be set up for operating materials-handling equipment on the Pier—something which has not been possible in the past.

For hotel accommodations, visitors may contact the Housing Bureau, Chicago Convention Bureau, 134 N. La-

Salle St., Chicago; telephone, Andover 3-4190.

The Packaging Assn. of Canada, for the third successive year, will play host to all Canadians visiting the Exposition. Headquarters will be set up by PAC in the Drake Hotel. The suite will be open from 9 a.m. to 9 p.m., April 20-23. Gordon G. Rolph, general chairman of the Headquarters-for-Canadians Committee, will be on hand as host.

TAPPI convention

Four sessions on corrugated containers highlighted the 38th annual convention of the Technical Assn. of the Pulp & Paper Industry, held last month in New York. Machinery, inks and coating, and operations of the corrugated containers industry were discussed. Panel sessions covered the following subjects: corrugated liner web printing, flute design and chrome plating, corrugated waste control and the glued lap box. These sessions were sponsored by the corrugated containers committee on operating problems.

George Pringle of the Mead Corp. was elected president of the association to succeed K. P. Geohagan of the Howard Paper Mills. Karl O. Elderklin was elevated to the vice presidency. The new members of the executive committee are Norman I. Bearse, John Buss, Henry C. Moore and Charles J. Sibber.

L. E. Simerl of Marathon Corp. resigned from the chairmanship of TAPPI's Packaging Materials Testing Committee. The committee is now headed by Dr. William Aiken of the Gardner Board & Carton Co.

At the meeting of the Packaging Materials Testing Committee, various testing methods under the groups' jurisdiction were discussed. These include water-vapor permeability at zero and 100 deg. F. and 90% relative humidity, creasing methods, moisture-proofness of packages, odor of packaging materials, seal strength of materials and the insect resistance of packages. Some of these test methods have been in use as TAPPI Tentative Standards, while others have been prepared as Suggested Tentative Standards and are being circulated for committee comment. The committee is planning several round robin tests to evaluate some of the test methods which have been suggested or developed from past activities.

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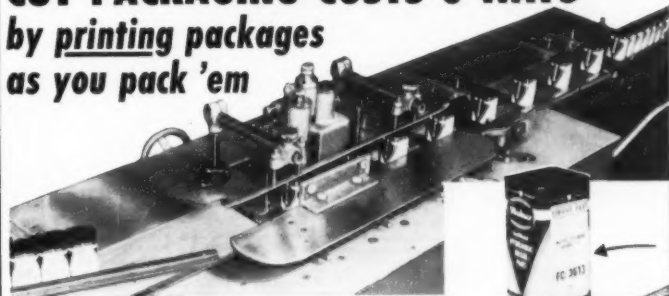
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FOR SALE: For immediate delivery; perfect operating condition; priced to sell: 24 inch, 4-color Kidder Cello Printer complete with humidifier, motor drive and drying equipment, and 40 plate cylinders and gears. 30 inch, Beck Sheeter with static eliminator and G. E. Electric eye cutoff controls. Opti-Check Plate Mounting Machine. Roto Cellophane Bag Making Machine complete with electronic control. Modern Clipper Bag Making Machine with 7-foot delivery conveyor. Address: Packaging Products, Inc., 111 West Fifth Street, Kansas City 6, Mo.

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EXPERIENCE PACKAGING MATERIAL SALES REPRESENTATIVE: Experience: 3 years as Sales Representative in the Packaging Industry; 1 year South America, 2 years Canada. Familiar with cellophane, saran, polyethylene, glassine, acetate, foil laminations. 20 years old, free to travel. Conditions: Contract, minimum 2 years, salary, expense account and overall commission in territory assigned. Box 507, Modern Packaging.

PACKAGING ENGINEER: Young, competent packaging engineer, for the past six years selling and demonstrating packaging machinery and materials. Formerly employed as plant supervisor in the candy and food industry. Desires new management position or responsible sales representation, since further growth is barred in his present position because of organizational situations. New York City location preferred. Box 510, Modern Packaging.

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Send complete résumé to C. B. Gressman, Personnel Director, 2000 South Ninth, Louisville, Kentucky.

SALESMAN: Progressive converter with modern new factory has openings for several men. No objection to side-line men. We are converters and printers of cellophane, glassine, polyethylene and polyfilm in the form of bags, rolls, and sheets. Our prices are most competitive and quality is top notch. In reply give age, experience, present lines carried, territory covered, etc. Box 496, Modern Packaging.

AGENTS WANTED: We are specialists in Heat Sealed Cells and Polly Bags and Tubes—printed—unprinted—highest quality—lowest prices—fast delivery—wide range of sizes. We meet all legitimate competition. We prefer men handling allied lines. If interested, write: New Jersey Cellophane Bag Co., 175 Clinton Place, Newark 6, N.J.

FOLDING CARTON SALESMAN: Leading Northern New Jersey Company has opening for experienced man. Modern equipped plant in advantageous position. Mail full details in first letter. Our employees know of this. Box 508, Modern Packaging.

WANTED: Aggressive, experienced folding carton salesman for Chicago territory. Salaried. Inquire Consolidated Paper Company, 20 North Wacker Drive, Chicago, Ill.—Phone Financial 6-5222.

SALES REPRESENTATIVE: Newly established dual purpose packaging division, by large manufacturer requires salesmen all territories. Must be familiar with cosmetic, candy, notion and baking industries. Containers are all metal, radically new and highly styled. Territories available on commission, exclusively or with other non-conflicting lines. In reply give age, experience, present lines carried, territory covered. Gabriel Williams Co., Inc., 130 Duffield St., Brooklyn 1, N. Y. Phone: MAin 5-2829.

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PITTSBURGH: Top rated folding carton manufacturer has outstanding opportunity for an experienced sales representative in the Pittsburgh area. Liberal salary and bonus. State age, education, and experience. Box 503, Modern Packaging.

SALES REPRESENTATIVE: We need an experienced folding carton man to represent us in a good southern territory with headquarters in New Orleans. Top salary plus bonus. If you are an outstanding producer, write giving age, experience and education. Box 504, Modern Packaging.

SALESMAN: Experienced in the sale of cellophane, polyethylene, polyfilm in sheets, rolls and bags, to cover Southeastern States. Attractive salary and commission, exclusive territory. Please reply stating age, experience, etc. Replies confidential. Box 506, Modern Packaging.

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PLASTIC SCRAP AND REJECTS IN ANY FORM: Cellulose Acetate, Butyrate, Polystyrene, Vinyl Polyethylene, etc. We pay top price for clear, colored and printed scrap in any quantity. Box 494, Modern Packaging.

WANTED: Cameron Slitter, Packaging Line, Labeler, Capper, and Mixer. Box 495, Modern Packaging.

WANTED

Hudson-Sharp Campbell Wrapper. Write full particulars as to model, age, price, etc. Box 498, Modern Packaging.

FOR SALE: Polyethylene (immediate delivery) Flat tubing. First Quality. All in original cartons. Subject to prior sale. 2,000 pounds 4 1/2 x 2 1/2 x .0015 gusseted 1,500 pounds 6 x 4 x .0015 gusseted C-1 1,000 pounds 6 x 3 x .0015 gusseted 1,000 pounds 5 x 3 x .0015 gusseted C-1. Box 499, Modern Packaging.

FOR SALE: Excess inventory of 27" lacquered Kleeview. First Class condition. Approximately 6,500 pounds of DBS Silver and B. Yellow. 8 1/2" dia. or trim in required width. Sell at 1/3 below existing list price schedule. Subject to prior sale. Box 500, Modern Packaging.

WANTED: Surplus foil or paper backed foil. Prefer large quantities—plain or colored—Box 502, Modern Packaging.

WANTED: Cellophane Sheeter—For rolls up to 24" wide—speed up to 10W sheets per hour. The M. Conley Company, P.O. Box 270, Canton 1, Ohio.

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FOR SALE: Plain Folding Cartons made of .018 bleached manila, alkali resistant. Size: 2 1/2 x 1 1/2 x 3/8. Straight machine tuck. 1,000,000. For immediate disposal from Chicago area. Box 509, Modern Packaging.

PLASTIC SCRAP: Cellulose Acetate and rigid vinyl sheet scrap in any quantity. Also Polystyrene, Acetate, Butyrate molded rejects, scraps and excess molding powder inventories. Box 497, Modern Packaging.

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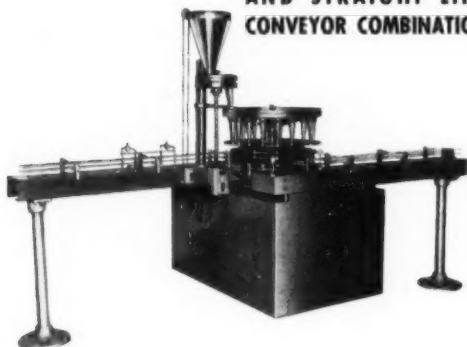
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Write for circular giving additional information.

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General Sales Offices

330 West 42nd Street, New York 36, N. Y.

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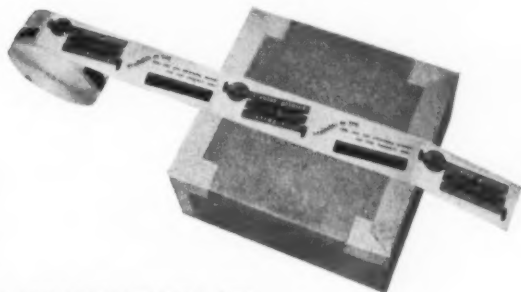
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1 Dozens of designs for *tomorrow's* plastics packaging will be on display for the first time in the Monsanto booth at the Packaging Exposition at Chicago in April . . . a whole "Gallery of Packaging Ideas."

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2 For the many people who will not be able to attend the Exposition . . . and for those who would like a *continuing* flow of new ideas in packaging, Monsanto is publishing a report, the "Plastics Packager" which contains ideas to be shown at the Exposition, plus many more. As new designs are presented you'll read about them in succeeding issues of this monthly report.

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